Incorporating *International Commerce*

MARCH 5, 1973

Commerce Today

Coming Developments in Business and Technology

After Taking Oath, Secretary Dent Moves Into Action-- Energy, Industry, Environment

Newsmemo

The market indicator titled "Consumers, Collegiate" continues in its familiar uptrend--but with some slackening on the male side. The Census Bureau reports college enrollment up from 8.1 to 8.3 million in the past two years. But the proportion of young men attending college is down from the levels of the late 1960s. A recent nationwide survey shows that 38 percent of all male 18-19 year olds are in college currently, compared to 44 percent in 1969. For 20-21 year old men, the level has dropped from 45 to 36 percent.

President Nixon will find many Americans already disposed to heed his advice to replace high-priced meat with fish. The U.S. is consuming more and more fish products. According to the National Marine Fisheries Service of Commerce's National Oceanic and Atmospheric Administration, consumption in 1973 may reach 11.6 pounds per capita. That is a full pound over the 1967 level. A record 64.1 percent of the 1973 total is expected to be imported, as the U.S. fishing fleet is not meeting domestic demands.

R&D in the U.S. may mean an expenditure of $30.1 billion this year. The forecast is by Battelle Laboratories, Columbus, Ohio. It compares with a 1972 figure of $28 billion, estimated by the National Science Foundation from still-incomplete totals. Battelle sees 1973 as beginning a new era in research and development growth in the U.S., with industry leading the uptrend and the Federal Government also supplying increased support. The Battelle forecast breakdown: Government expenditures, $16.3 billion; industry, $12.2 billion; colleges and universities, $1.1 billion; non-profit institutions, $442 million.

Are U.S. auto service equipment firms interested in the Soviet market? Yes, say Commerce's foreign trade specialists who have closed out a packed U.S. show for the Autoservice 73 international exhibition to be held in Moscow May 23--June 6. A total of 47 American equipment makers are now busy with plans for their booths. Pneumatic tools and lube items will be prominent in the show. One of the market attractions is the announced Soviet 1971-1975 Five-Year Plan goal to add 8,600 new service stations to their national network.

Much of the story of the U.S. multinational company remains to be told. This cautionary note was underlined by U.S. Tariff Commission chairman Catherine Bedell in presenting a 930-page report on MNC activity to the Senate. Best available comprehensive figures for the study were from a 1966 Commerce special census and a 1970 Commerce sample survey. Much has happened in the fast-developing MNC field in more recent years, the Commission chairman noted.

Another Ombudsman stands ready now to assist the small businessman. Commerce, of course, has set up a special trouble-shooting office under the title, Ombudsman for Business. Now the Foreign Credit Insurance Assn. (FCIA) has appointed an Ombudsman to assist exporters and bankers with export credit insurance problems. "We believe this office will be of special benefit to the small businessman," says a FCIA spokesman. Write: Robert F. Sharpe, Manager, Office of Ombudsman, FCIA, 250 Broadway, New York, N.Y., 10007.

Commerce Today

Incorporating *International Commerce*

Vol. III, No. 11, March 5, 1973

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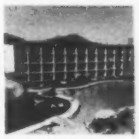

COVER: *Newly-appointed Secretary of Commerce Frederick B. Dent is sworn in at the White House by Chief Justice of the Supreme Court Warren Burger as President Nixon and Mrs. Dent look on.*

U.S. DEPARTMENT OF COMMERCE

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ECONOMIC
HIGHLIGHTS

State, Local Governments Grow Rapidly; Special Factors Cause Budget Surpluses

Economic Highlights is prepared by the Office of the Assistant Secretary for Economic Affairs, and is based on the latest economic indicators (see charts on adjoining page).

To many people, "government" means the Federal Government. Yet, State and local governments provide a broad range of services such as schools, streets, police and fire protection, water, and sanitation. These lower levels of government are an important, and rapidly growing, part of the national economic picture.

Expenditures of State and local governments totaled $163 billion in 1972 and receipts were $175 billion. It should be noted that the resulting $12 billion surplus was unusually large. Furthermore, many units, especially large cities, have experienced financial difficulties in recent years, and some appear to be still hard-pressed.

The size of the surplus was due largely to two special factors. Many governments raised taxes in 1972 and revenue increased faster than expected as the national economy expanded vigorously. The other factor was the rapid payment of Federal Revenue Sharing funds, a development that was largely unanticipated in city, county and State budgets.

Of the total expenditures of State and local units in 1972, $149 billion was for goods and services (the remainder consisted of transfer payments for such items as public assistance, which have less economic impact). These expenditures utilize resources directly, as in the hiring of workers, and indirectly through purchases of the output of private business. State and local governments therefore controlled the consumption of about 13 percent of this country's GNP last year. As shown in the second chart, these expenditures have increased steadily over the last four years at a rate of about 10 percent. They therefore constituted a consistent force for expansion even during the slowdown of 1970.

While State and local government expenditures show a strong uptrend, tax rate increases in the immediate future should be more moderate in view of the aggregate budget surplus and the expectation of continued strong growth in the national economy in 1973.

The recent expansionary role of State and local governments appears even greater when employment data are considered. Since 1966, the number of State and local governmental employees has increased by 2.41 million, or over 25 percent of the total increase in nonagricultural wage and salary employment during the period. The third chart depicts this steady climb in State and local government employment. In contrast, Federal Government civilian employment has remained virtually static for several years.

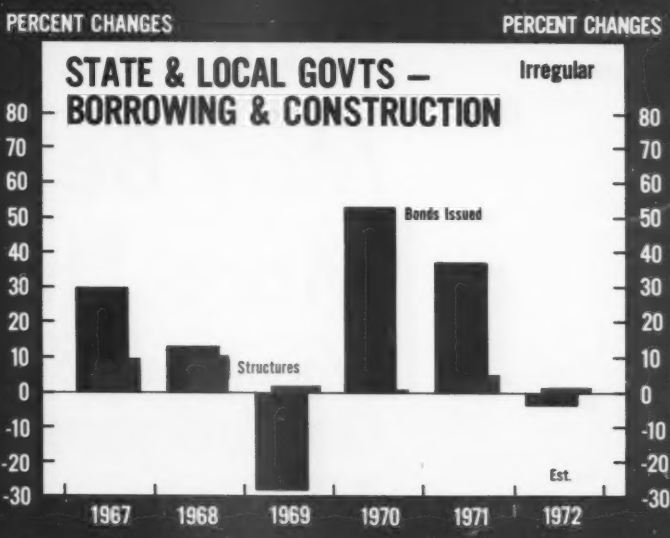
The borrowing and construction activities of State and local governments have increased significantly since 1966, but the year-to-year changes have fluctuated widely. Moreover, the relative importance of State and local governments in these activities indicates they should not be ignored when analyzing economic conditions. State and local construction accounted for 21 percent of all construction activity in 1972, and bonds issued by these governments were equal to 87 percent of all corporate bonds issued from January through October.

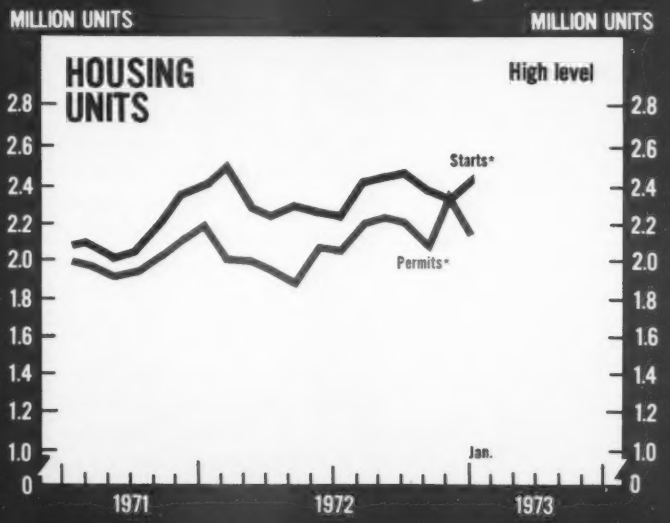
Thus, both in terms of relative importance and short-term behavior, the economic significance of State and local governments appears much greater than generally recognized.

Other economic data

In December and January, retail sales continued the vigorous uptrend of 1972; homebuilding remained at the record 1972 level.

Latest Indicators





*Annual rates
All monthly data seasonally adjusted

Commerce Today
Vol. III, No. 11
March 5, 1973

Pollution Control Costs May Be High, But Results More Than Justify Price

Group Hears Secretary Dent, Others Stress That Environmental Fight Has Its Bright Side

Pollution abatement, despite its high cost, holds definite advantages for industry as well as for society in general.

This was one of the points emphasized at a recent meeting of the National Industrial Pollution Control Council (NIPCC), which was opened to the news media and the public. NIPCC was established in April 1970, to provide a framework of cooperation and communication between government and industry in the area of pollution control.

Speakers at the Council meeting were Secretary of Commerce Frederick B. Dent; Secretary of Agriculture Earl L. Butz, who is Counselor to the President on Natural Resources; Bert S. Cross, Chairman of NIPCC; Russell E. Train, Chairman of the Council on Environmental Quality; and William D. Ruckelshaus, Administrator of the Environmental Protection Agency.

Cross said that he was leaving after nearly three years as Chairman of NIPCC. Secretary Dent announced that he would be succeeded as Chairman by NIPCC Vice Chairman Willard F. Rockwell, Jr., Chairman of Rockwell International, and that Shermer L. Sibley, President of the Pacific Gas and Electric Company and Chairman of the Utilities Sub-Council, would be Vice Chairman.

The high cost of pollution abatement was stressed at the Council meeting, and it was noted also that the public will have to bear the brunt of the cost, that it cannot be financed entirely out of industry profits, already at a low point. But it was also brought out that there is a brighter side of the picture in the advantages of clear air and water, that definite progress is being made in solving the problem, and that this progress will become clearly visible to the public in the next few years.

Secretary Dent commented on the benefits to be gained in pollution abatement.

NIPCC IN SESSION—*Members of the National Industrial Pollution Control Council occupied front seats at an open meeting which included speeches by high-ranking government officials, including Secretary of Commerce Frederick B. Dent, and Russell Train, Chairman, Council on Environmental Quality.*

"The most obvious, of course," he said, "is the benefit to our entire society from a cleaner environment, with the resulting improvements in our health and in the quality of life in general. In addition, cleaner water and air mean lower treatment costs for industry and less damage to structures and equipment.

"We can also expect growth and higher employment for those industries specializing in pollution abatement equipment. Industries whose production involves a low pollution process also stand to gain. There may also be technological spinoffs from the extensive research and development in pollution control. . . .

"The cleaning up of our environment is a desirable goal and one which probably should have been receiving attention very much earlier in our history. This is a vast project and it will not come free. The public will certainly bear the brunt of the cost.

"Industry must also bear a portion of the cost, and while the cost impact varies from industry to industry, certainly higher production costs are bound to occur as a result.

"Let's recognize that public expectations of business are very high and that public understanding of industry's role in cleaning up the environment is very low."

Secretary Dent commented that one role of NIPCC is to assist industry in correcting public misconceptions.

He pointed out that in the last three years American industry has spent more than $14 billion on pollution abatement, $10 billion of it on pollution control and another $4 billion for research.

"Many Americans," he added, "believe that the cost of a clean environment will not affect them and can merely be absorbed by the profits of private industry.

"While exact figures on the cost of cleaning up the environment are at this point difficult to determine, one thing is very clear: the total cost of this operation cannot be borne by American industry alone. The public must realize that pollution abatement costs borne by industry must not go beyond industry's capacity to absorb them.

After-tax profit

"The after-tax profits per dollar of sales of all manufacturing corporations in this country have fluctuated between 4.0 percent and 5.6 percent during the last 20 years. The rate was 4.2 percent for the first three quarters of 1972.

"This average 1972 profit rate has been exceeded in 17 of the past 20 years. Clearly this indicates that profits today are at a low point in the history of our country for the past 20 years at least and the need for profits is to go up, not to decline.

"Job creation, the rate of economic growth and the location of economic growth are all dependent upon profit rates. If we are to provide the widespread standard of living our Nation now enjoys, and provide the capital in both the private and public sectors—

NIPCC WELCOMED—*Secretary of Commerce Frederick Dent welcomed members of the National Industrial Pollution Control Council and its audience.*

for such projects as pollution control—then we must insure reasonable profit rates."

Secretary Dent pointed to the difficulty in obtaining adequate figures on the cost of cleaning up the environment. He said the Commerce Department this year will complete a survey of 50 firms with pollution abatement problems, and that more extensive surveys are anticipated in the following year.

The first problem, he explained, is the lack of cost definitions. The Department, he said, is working with the Office of Economic and Cultural Development, a NATO agency located in Paris, in a two-year study to arrive at a common agreement on pollution abatement cost definitions.

Emphasizing the impact of the cost of pollution control on both industry and the public, he said:

"It has been predicted that some marginal firms may go out of business, that some unemployment and economic dislocations may occur, that productivity will be lowered, and that higher production cost will place a further burden on our trade imbalance problems."

At the same time, he said, pollution control problems should be viewed instead as challenges to the American business system.

Secretary Butz said his job, as Counselor to the President on Natural Resources, will be one of coordination and policy formulation and articulation where policy cuts across departmental and agency lines. It will involve, he explained, a resolution of differences where they may arise.

Commenting on proposals for a return to "organic farming," he said:

"Before we go back to organic farming, somebody must decide which 50 million Americans we are going to let starve."

Cross said the Nation "is outgrowing the emotionalism and finger pointing which have been associated with environmental concerns in earlier years, and we have entered a period of implementation of beneficial programs . . .

"We also have come to the sober realization that pollution control is a problem more complex than many had anticipated. . . . We know that runoff and other non-point sources of pollution are a major problem, and that many municipalities probably will not achieve secondary wastewater treatment by the current 1977 deadline. We have found that environmental improvement will cost not billions of dollars; we have seen estimates running into the hundreds of billions.

"These and other facts suggest the likelihood of periodic modifications in emphasis as we move toward higher levels of pollution abatement. They clearly reveal the need to avoid programs which are low in cost-benefit ratio or which are not in the best long-range interest of the environment."

Leading pollution fight

Cross said that between now and 1976 the electric utilities, petroleum, chemical and steel industries each would spend $1 billion for pollution control on top of their previous large expenditures.

"The fact is that, by comparison," he added, "more has been done in the past three years to abate industrial pollution in the United States than has been done to control municipal pollution, agricultural pollution, or the pollution caused by nature.

"I believe NIPCC can take a certain amount of credit for the strong commitment U.S. industry has made toward pollution control."

Pointing out that industry "is but one piece in the complex pollution puzzle," he said:

"What is missing at the present time is an integrated environmental maintenance and restoration program. Such a program must take into account the country's needs, the available resources, the cost-benefit ratios

and the trade-offs required to make such a program effective. It must take into account each of the multiple causes of our environmental deterioration. The order of priorities must also reflect the need to maintain a healthy American economy, based on, among other things, a continuing ability to compete globally."

Train told of the accomplishments that have been made in working toward pollution abatement, both in the domestic field and in international cooperation. He said the Administration would resubmit to Congress a number of legislative proposals in this area, not acted upon in the last Congress, although some of them would not go up in precisely the same form. The strip mining bill, he explained, will be in a stronger form than before.

Train said that pollution abatement offers numerous opportunities to American industrialists, one of which is the prospect for increasing exports of pollution abatement equipment.

He expressed concern that the U.S. may be losing its position of leadership in this field. Japan, he said, is very aggressive in the development of pollution abatement technology, and in the export of this technology. According to estimates of the Organization for Economic Cooperation and Development (OECD), he added, Japan is expected to spend 2.3 percent of its gross national product on pollution abatement technology in the next five to 10 years, compared to 0.7 percent for the U.S.

"Our own industry," he said "should be taking a more aggressive role in this market."

Train said also that he suspected the U.S. is not doing half as good a job as it should be doing in the area of technology information transfer. He suggested that a small "thinking committee" should be set up to explore how government and industry could do a better job on the problem. A lot of companies, he said, do not know what is available in this field.

Ruckelshaus explained that the budget for the Environmental Protection Agency for the next fiscal year is $3.5 billion, of which $3 billion is for sewage treatment plants. Within a three-year period, he said, including the next fiscal year, the Federal Government will spend nearly $9 billion on sewage treatment plant construction compared with just under $3 billion in the preceding 15 years.

The Administration, he said, is not spending the full $5 billion made available by

NIPCC CHAIRMAN—*Bert S. Cross, NIPCC chairman, presided at the Council's open session in the Department of Commerce auditorium.*

"The role and contributions of NIPCC have undergone considerable evaluation both within the Department of Commerce and within the White House. The conclusion was that your organization meets an important long-term need in our national program to provide a clean environment. So we ask you to keep coming back for meetings such as this to continue to provide the administration with the knowledge American industry has, and to let you and the industries you represent know the thinking of the leaders in government."

—Secretary Dent

"The National Industrial Pollution Control Council is a proven tool that is in working condition. The extent to which it is used in the weeks and months ahead depends in part on us as industrial leaders. But how well NIPCC is used—its effectiveness—will be determined largely by government, through its willingness to listen, and by its support of our attempts to provide industrial information that can help to insure the solutions of environmental problems."

—Chairman Cross

EPA CHIEF—*William D. Ruckelshaus, Administrator of the Environmental Protection Agency, was another featured speaker who outlined what is being done in a number of environmental areas.*

RESOURCES — *Secretary of Agriculture Earl L. Butz, Counselor to the President on Natural Resources, discussed energy and the environment in a key address at the recent NIPCC meeting.*

Congress for sewage treatment plants for two reasons: concern over the impact on the budget; and concern that the economy could not absorb so much money so fast.

Ruckelshaus said that "significant strides have been made in the last 24 to 36 months toward abatement of air and water pollution," and that "there is a need to emphasize that we are getting somewhere." He added that the progress thus far made, both in administrative activity and legislation, has created a momentum that in the next four or five years will show "an appreciable improvement in the quality of air and water in this country.

"We think it is clear," he commented, "that by almost every measurement we can make the air is getting cleaner in most of the metropolitan areas of the country.

"Water is somewhat more difficult to measure. But in the areas of municipal and industrial pollution we believe that water is improving where municipal or industrial pollution was the cause.

"We are not making as much progress in the agricultural area, and the recent Council on Environmental Quality report indicates that the world runoff and feedlot problem and pesticides and fertilizers used in rural areas are a tremendous problem, and we haven't addressed that problem as aggressively and intensively at any level of government as we have the other two.

"The question of how you measure it is something we are trying to get hold of. We are trying to establish a national data bank that will give us a yearly report on the progress made."

Ruckelshaus pointed to the need for more flexibility in clean air standards, with a possible need for legislation in this area, and cited the problem in Los Angeles as an example. He said that within the next year his agency will be coming up with water effluent guidelines for major U.S. industries.

Standards for air and water, he explained, are a floor that municipalities must attain, meaning that they can go higher if they wish but cannot go lower.

The attitude of the average American businessman toward the pollution problem has changed dramatically in the last three years, he said. Although before, he said, they questioned whether anything was necessary, now their attitude is that they should be told what they have to do, and given a reasonable time to comply.

He emphasized, however, the need for a greater degree of public trust in what is being said and done in the pollution abatement field if real progress is to be made. He said that in going around the country he finds a large measure of distrust.

This problem can be met, he observed, only by "scrupulous honesty" in what is said to the public. Nevertheless, he predicted that public confidence will be regained when people see genuine progress made in cleaning up the air and water.

More Tourists Needed To End U.S. Status As 'Underdeveloped Nation'

New Drive Will Zero In On Eight Countries To Improve U.S. Share Of $20 Billion Industry

An aggressive five-year marketing plan is expected to bring millions of foreign tourist dollars to the United States, help the balance of payments and buoy markets for U.S. consumer products and services.

The plan of the United States Travel Service will zero in on eight countries for 18 months, carefully measure the results and move on to an even more accelerated effort to sell this country as a prime vacation spot for foreign visitors. Its architect and the man who will engineer the program is C. Langhorne Washburn, Acting Assistant Secretary of Commerce for Tourism.

Noting the bicentennial celebration of 1976, Washburn asserts that "either this country thinks it is important to get 22 million foreign visitors here by 1976 or it doesn't. Either we want our fair share of the $20 billion international tourism market or we don't.

"We are an underdeveloped Nation as far as tourism is concerned," Washburn asserted further. "And we ought to get off the dime and do something about it."

In formulating the new program, which also necessitated reorganization of the Government's tourist office, Washburn said he literally roved the world and "picked the brains" of tourism industry officials of other countries in an attempt to find outstanding programs to incorporate into the U.S. plan.

"There really were none," he concluded. "They were doing nothing new. In fact some of the other countries were beginning to copy what we do.

"We simply have to merchandise this coun-

CALIFORNIA TOWER—*A landmark in San Diego's Balboa Park, this beautiful tower is a scenic attraction to be viewed by a growing number of foreign visitors to the U.S. in the future.*

try the way you merchandise a consumer product," he continued. "It's a direct sales approach of the United States as a travel destination."

The most important step, Washburn said, is to "prove what we are doing is right." This is one reason the USTS efforts and funds will be concentrated on travel markets which will produce the largest near term measurable results.

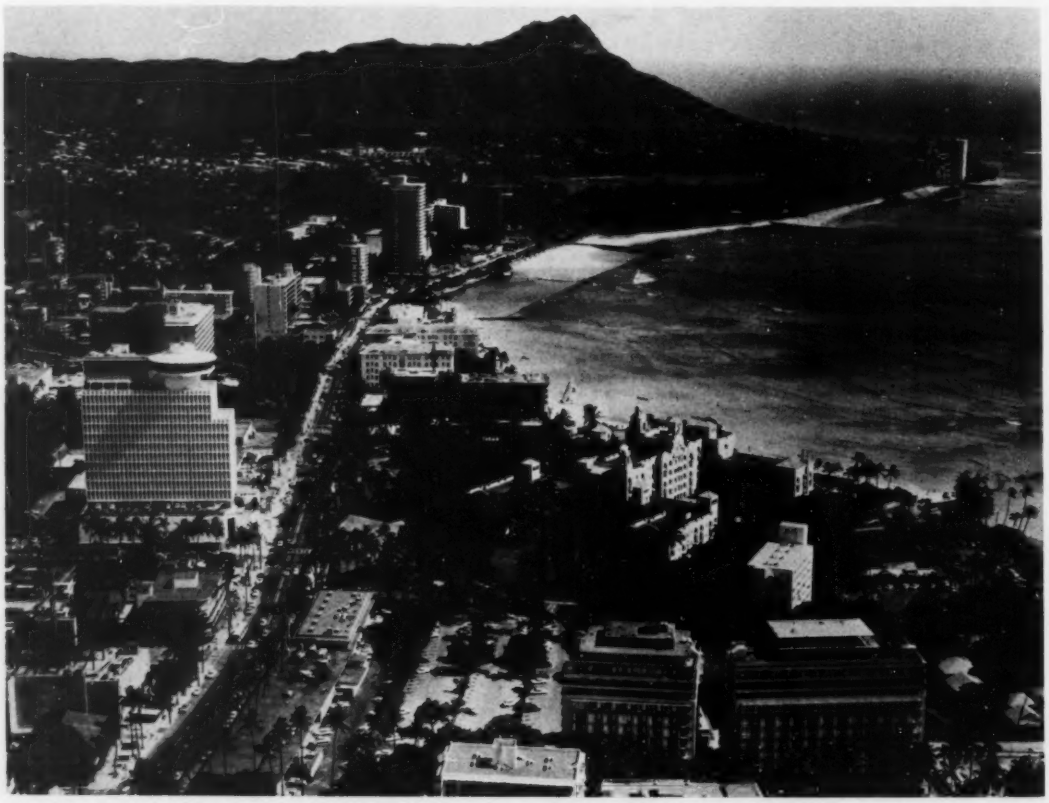
Concentrated effort

The plan calls for concentrating efforts in Canada, Mexico, Japan, United Kingdom, Germany, France, Australia, and Brazil.

"These eight countries account for 90 percent of all foreign arrivals in the United States," Washburn pointed out.

The measurable results will be an integrated effort in areas of:

- advertising and promotion,
- market development,
- information services,
- research and analysis,
- visitor services,
- administration,



HAWAII—*The Nation's newest states are also included in the foreign tourist push being promoted by the United States Travel Service and this scene of Hawaii's Diamond Head, with its luxurious beaches and hotels, is likely to attract many visitors from other countries in the years ahead. It is a key spot.*

• travel trade, business and convention travel.

Two of the key USTS offices will be the managing director of the international division, overseeing the eight regional offices; and the managing director of the domestic division, who will study what happens when people get here and urge U.S. residents to take their vacations at home—in this country.

Among the marketing techniques are tourism development packages. Washburn noted that 73 percent of all German tourists use special package charters.

Other initial results of the USTS push to sell this country as a tourist mecca are multilingual port receptionists at key airports, such as the Golden Girls at JFK in New York. Washburn noted the need for more of these services and multi-lingual banking facilities.

An additional need is implementation of international traffic signs which would allow foreign tourists to be more at ease on the Nation's highways.

On devaluation

"This is just one more factor which makes the USA an increasingly attractive tourism goal for foreign travelers. The 10 percent devaluation of the dollar could result in an increase of 85,000 to 100,000 more overseas visitors to the USA this year.

"The increase of overseas tourism to the USA could result in additional foreign currency receipts of $33 million to $39 million based upon past expenditures of $400 per person. The new estimate represents about a 3 percent increase based on the projected impact of the currency realignment."

—C. Langhorn Washburn

Also, the establishment of information centers where foreign visitors arriving in this country can call a number free and in his native tongue get accommodations and answers to questions.

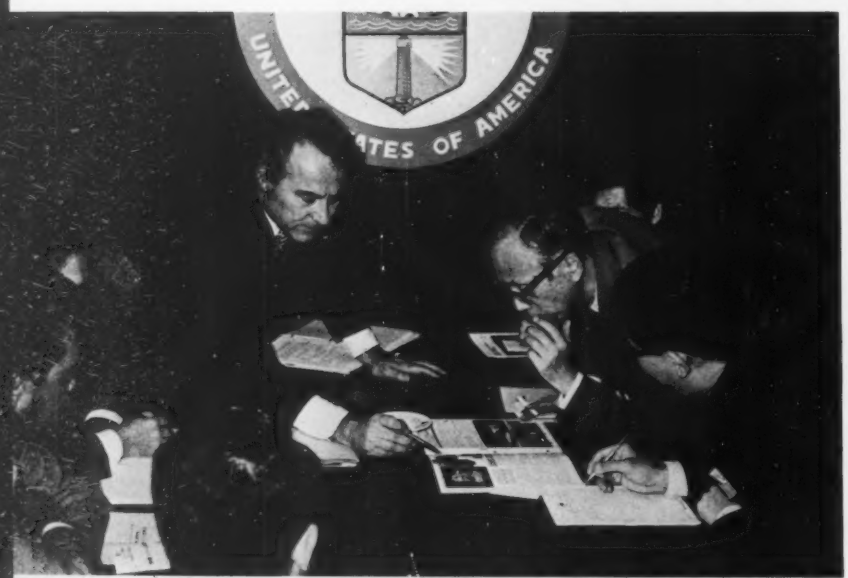
In 1971, when the trade deficit was $5.5 billion, Washburn concluded, the tourist gap deficit was $2.7 billion. Thus, half the trade deficit problem was that Americans are traveling abroad and not bringing enough people to this country. The accelerated USTS effort expects to improve the deficit picture and produce measurable results.

TIMES SQUARE—*Allied Chemical now dominates the famous Times Square in New York, a scene which attracts many foreign and domestic sightseers.*

SAN FRANCISCO—*A ride on a famous street in San Francisco is one of this country's tourist attractions expected to draw vacationing visitors.*

Agent-Distributor Service Now Going Worldwide

Commerce Department Can Help U.S. Firms Find Representatives In Almost All Nations



TOP-PRIORITY DISCUSSION—*An American company president traveled to Japan in his important search for a Japanese representative for his firm. He was Stephen Georgieff (left), of Ferguson Machine Co., with agent-distributor candidates at a U.S. Trade Center show in Tokyo last November. The accompanying story describes how Commerce Department pursues such a search worldwide.*

The U.S. Government can now help an American company find an agent or distributor for its products in almost any country of the world.

The Agent-Distributor Service (ADS), conceived in 1969 but available for only 35 countries until its recent expansion worldwide, has now replaced the earlier, costlier Trade Contact Survey as a primary Commerce Department means of assisting U.S. firms to establish representation overseas.

The popularity of this service among the business community is reflected in a rapid increase in its use. During its first year, beginning in July of 1969, a total of 529 requests were received. During the fiscal year that ends June 30, more than 2,500 requests will be received. Indications now are that this total will rise to more than 5,000 in the next year.

A recent Commerce Department study of the effectiveness of the Agent-Distributor Service has turned up the following highlights:

► It is perhaps the single most important way in which U.S. firms locate agents and

distributors in the developing nations—57 percent of all requests for ADS help relate to these countries, which Commerce trade specialists call "emergent market" nations.

► For each 1,000 requests received and processed, more than 200 users will complete the process by contracting with a suggested representative agent or distributor.

► Approximately 20 percent of the service users report that they have had no prior exporting experience.

The ADS service is offered at a cost of $10 to the requesting U.S. firm. It is expected that those requesting it will have first checked out the possible trade connections that are generally available in the Trade Lists published by Commerce or in the Foreign Trade Opportunities columns of the Worldwide Business Services section of this magazine.

***Information on these and other services offered by Commerce to U.S. exporters is available at any of Commerce's District Offices, which are listed on the inside back cover of every issue of* Commerce Today.**

The service offered individually to the requesting firm for its $10 fee consists of a specifically-prepared list of up to three names of foreign companies. To be placed on the list the foreign company must have expressed interest in the specific U.S. proposal and declared its readiness to correspond with the U.S. requesting firm.

WHERE THE ADS WORK BEGINS—*U.S. Foreign Service posts around the world are vital links in the Agent-Distributor Service network. At faraway Perth, Australia, for example, Economic/Commercial Officer Carl Jacobsen (second from left) and U.S. Consul John Lacey (center) stand ready to provide this assistance. Also in photo are U.S. Ambassador to Australia Walter Rice (second from right) and former Sydney U.S. Trade Center officials John Klinglehut and Chester E. Norris (left and right).*

FREQUENT TOPIC—*When John P. (Basil) Wentworth, U.S. Commercial Attache in Tel Aviv (right), talks to Israeli businessmen the matter of establishing agency or distributorship links with U.S. firms often comes up. From left are an official of Elron Electronics; Danny Bergman, Rachem Israel Ltd.; and Heskel Yehuda, Wentworth's assistant.*

The list also represents a judgment by the U.S. Commercial Officer or one of his assistants at a Foreign Service post that the three selected firms in the specified country are the most likely to enter into a mutually beneficial agreement with the American company. The list gives addresses of the firms, persons to contact and types of business.

The format of the ADS is designed to enable speedy preparation and processing. It consists of two pages. The first gives a brief profile of the American company requesting the service and the product it is offering as well as other information describing the kind of firms considered to be the best prospects for handling the product line being offered.

Descriptions of products offered should be detailed, lucid and graphic and as non-technical as possible. Replies, which are listed on the reverse side of the application, generally provide names of prospects for the U.S. firm plus any comments which the Foreign Service wishes to make.

International trade specialists at Commerce's 43 District Offices throughout the U.S. will assist in preparing the application.

ADS requests are limited to assistance in seeking an agent or distributor for a single commodity or related group of commodities in a single country or a specific region of a country. When requests include unrelated commodities, the items should be arranged in groups and a report requested for each group. Firms requiring representation in more than one area of a country should prepare a separate ADS for each area.

The requesting firm can usually expect a reply within 60 days of application.

Conserving Energy May Be Patriotic, But Mainly It's Just Good Business

Nineteen-Point Program Details How Firms Can Help Nation While Increasing Profits

Asserting that the fuel shortage has "neared crisis proportions" in certain areas of the Nation, Secretary of Commerce Frederick B. Dent has issued an appeal to American business and industry to conserve energy.

The Secretary's appeal was made in a letter to the presidents of some 45,000 companies, primarily manufacturers and other large consumers of fuel, as part of a broad national effort which also includes conservation by homeowners and small users in the private sector as well as by government at all levels.

"America is up against a very tight fuel situation in many sections of the Nation, and in certain areas it has neared crisis proportions," Dent wrote. "So far, shortages have involved principally natural and propane gas and distillate oils, including No. 2 and diesel.

"While energy fuels are not always interchangeable, they are directly interrelated as a part of the national demand-supply pattern, and it is essential that all consumers institute sharp conservation programs.

Immediate action should be taken to reduce consumption from all energy sources as much as possible without restrictions on production and the economy and without creating discomfort or health hazards to the population."

Fuel shortages, transport and crop problems and severe winter weather recently have resulted in the closing of schools, offices and industries in sections of the American midcontinent and elsewhere. Heating oil import restrictions have been eased and other steps taken to alleviate the shortage.

Secretary Dent said the situation involves a shortage of fuels for electric generation, heating and manufacturing process purposes.

"Most major natural gas transmission pipelines have been compelled to curtail deliveries," he said. "Many distributors have been forced to shut off interruptible custom-

ers entirely, and, in some cases, limit or reduce deliveries to firm consumers. Many have, in turn, found it necessary to prohibit sales to new customers, and to refuse increased sales to present customers.

"Distillate fuel oils, principally No. 2 used in homes and other small burners and heaters, and ordinarily the principal alternate fuel for interruptible gas users, is in extremely short supply in many areas. Nationally, reserve stocks are well below a year ago.

"Propane gas, another substitute for natural gas by many users, is short in many areas due both to the shortage of natural gas and to unprecedented demands for late crop drying in several Midwestern states. Reserve supplies are available, but pipelines are full and relatively small amounts can be moved by tank cars."

The Commerce Department's Bureau of Resources and Trade Assistance, in cooperation with industry, has proposed a number of measures which industry and commercial users could follow to contribute to the energy-conservation objective. The suggestions are.

• **Cut heating in unoccupied space**—where practical, and found to be economical, turn thermostats down or off at night and on weekends in spaces and buildings unoccupied during those periods.

• **Lower thermostat setting**—Energy can be saved by lowering the thermostat setting several degrees fahrenheit if feasible, thus reducing the amount of heating required in noncritical areas.

• **Check leakage** — Inspect — and repair where required — insulation, weatherstripping, caulking, and leak sources of all rooms and buildings that are heated and air conditioned.

• **Maintain equipment** — Keep heating, cooling, power and process equipment in top operating conditions, that is, check for steam leakages and poor pipe insulation, and keep all heat transfer surfaces, filters, vents and flues clean. In burners, clean and adjust combustion air and fuel jets for maximum flame efficiency.

• **Reduce ventilating air**—Where safety permits, reduction in ventilating air can result in substantial power savings. In some cases, reducing ventilating air quantities by 50 percent can reduce the power load by 12.5 percent.

• **Install insulation** — Under most conditions, proper insulation of ceilings and walls will pay for itself in heating and cooling costs. For existing buildings, expert technical advice should be sought.

DESIGN CONSIDERATION—*New insulating windows containing a "blanket" of special dry gas between the glass panes (sealed above by a technician) are being considered as energy conservation systems.*

• **Recycle waste as fuel**—Where practical, use normally discarded plant by-products such as drain oil and sawdust as a fuel supplement.

• **Utilize waste heat**—Up to 25 percent in fuel savings can be realized by installing recuperative combustion systems in burner exhaust and process heat vent stacks.

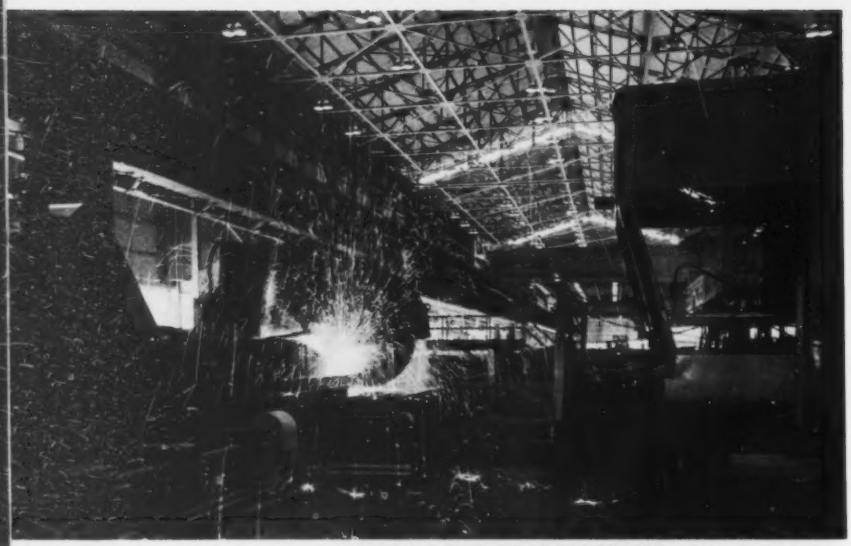
• **Automate combustion system controls**—Evaluate the efficiency of your manually operated plants. Consider automatic controls for optimum burner efficiency and repeatability.

• **Consider multiple fuel capability** — If your major plant or process is capable of burning only one fuel, carefully consider the possibility of adding alternative fuel burning capability. Where feasible, include coal as a possible alternate fuel since this is in plentiful supply.

The following suggestions pertain to conservation of electrical energy:

• **Cut back lighting load**—In some cases, all perimeter lighting can be turned out and natural lighting used. In certain areas, every other light could be turned off to reduce energy consumption without seriously impairing illumination.

• **Use photocell switches**—Install photocell control switches on exterior lighting for



ENERGY FOR PRODUCTIVITY—*America's industrial productivity depends on wise use of energy to keep industrial complexes such as this one in operation. Conservation while maintaining productivity is a key to the 19-point program.*

A LONG TERM ANSWER—*Nuclear power may be one of the long term solutions to the energy crisis, but in the short run, emphasis is on conservation. This nuclear power station at San Clemente, Calif., provides 430,000 kilowatts of electricity—enough to supply a city of well over half a million population.*

parking lots, building lighting, and security flood-lighting.

• **Add timeclock controls**—At selected locations, utilize timeclock controls to further reduce lighting and heating after certain hours.

• **Check power factor**—Determine and correct low power factor; that is, the ratio of true watts to volt-amperes or the phase relationship between voltage and current. Generating equipment, transformers, switchgear and the like need additional current-carrying capacity if the power factor is low, thus the initial cost of equipment can be lower if unity power factor is maintained. Improvement of the power factor reduces system losses and avoids a billing penalty.

• **Conduct plant load survey**—Considerable savings can be made by properly loading motors, adjusting belting, and eliminating unnecessary shafting.

• **Reduce maximum demand load**—Electrical current (or fuel) to certain types of heating equipment, such as oil heaters, core baking ovens, heat-treating and annealing furnaces, melting furnaces, and so forth, can be reduced or interrupted for short periods with little or no loss in temperature, and no loss in production. Motor-driven air compressors can be unloaded for brief intervals without stopping the motor, with little loss in pressure. Machines connected to motors by means of magnetic pneumatic clutches may be declutched without stopping the motors. Also consider reducing load for off-seasonal operations not now requiring maximum demand.

• **Rescheduling for off-peak periods**—Consider rescheduling work, production or any special operations to off-peak periods; that is, start refrigeration equipment an hour to two earlier than normal and pull the temperature down a few degrees below normal. By reducing the temperature lower than usual and then resetting the water chiller thermostat higher than normal, the power demand during the peak load period will be less. If the equipment has a demand limiter, further reductions in peak power demand can be realized by resetting the limiter to 80 percent during the working day. Additionally, if feasible with your operations, a substantial power saving can be realized by shutting the chiller down one hour before the normal end of the day. If the chilled water pump and the air conditioning fans are allowed to continue operation, generally no objectionable increase in space temperature will be noted. This same procedure can be applied during any peak period defined by the electric utility. This can apply to natural gas units as well.

• **Convert to higher voltages**—where practical and found more economical, convert to higher voltage systems.

• **Balance total plant energy load** — For greatest efficiency and savings, a total plant energy balance or system approach should be considered rather than concentration on a single area.

DOMESTIC BUSINESS REPORT

- **Secretary Dent discusses business**
- **Phase III repricing and mandated cost rises**
- **Textile industry seeks uniform pollution control standards**
- **Communication industry is pace setter**
- **Cable television may reach 23 million by 1980**

Businessmen Hold Key To Phase III Goals

"Business statesmanship is needed to make Phase III a success," and American business' continued support of Phase III "can put this country across the goal line of non-inflationary growth," Secretary Dent has asserted.

"This is truly a major objective for American business and one worth your most diligent attention," the Commerce Secretary told the Georgia State Chamber of Commerce recently.

He noted that while Phase III is a step toward a return to the marketplace, this Administration has made it clear it will not hesitate to use its discretionary powers to halt unwise wage and price increases.

As a new member of the Committee on Interest and Dividends, Secretary Dent said it was gratifying to find that in 1972, of the 7,000 largest corporations covered by voluntary guidelines to restrain dividends to no more than a 4 percent increase, only 43 corporations, less than 1 percent, declared dividends in excess of the guidelines.

Moreover, of the 43 companies that were found to have exceeded their dividend ceilings, 41 have agreed either to offset or otherwise compensate for the portion of their dividend payments that exceeded their permissible ceiling.

"Where in the world—or in our society—could one find a more responsible, commendable record," Dent asserted. "The business community is to be congratulated for its splendid cooperation."

Reviewing economic progress, Secretary Dent noted that after adjustment for higher prices, the economy grew by about 6.5 percent last year, the rate of inflation declined to about 3 percent, and per capita income rose by 7.7 percent during 1972.

"In 1973, the economy is expected to grow almost 7 percent, and once again, we expect to hold the line on inflation," he said.

"Recent data on key sectors of the economy seem to bear out the expectation of continued rapid growth in the economy in 1973," he continued. For example, businesses anticipated spending about 100 billion this year on new plants and equipment, a 13 percent increase over last year.

"Let's hope that these expenditures will also result in a big productivity increase," said Secretary Dent.

In addition to the Administration's commitment not to raise taxes, and to cut expenditures to effect budget savings, Secretary Dent said the third objective of Phase III is to contain inflation.

"Further economic expansion is essential to provide the new jobs necesary to reduce unemployment to acceptable levels," Secretary Dent said further. "Economic expansion accompanied by excessive wage and price increases is self-defeating, since inflation will result and rob both workers and consumers of the benefits of economic growth.

"Let us build an economy that will be a strong element in the President's goal of bringing lasting peace to this great country and to the world."

Ombudsman For Business

Businessmen who need assistance in their dealings with the Federal Government have a central office in Washington, D.C., to write or call for information, suggestions, or even for registering complaints — the Commerce Department Ombudsman for Business.

All inquiries should be addressed to the Ombudsman, Thomas E. Drumm, Jr., Special Assistant to the Secretary, U.S. Department of Commerce, Washington, D.C. 20230, or call 202-967-3178.

U.S. Textile Industry Seeks Uniform Pollution Abatement Standards

"Assuming that reasonableness and practicality will prevail in setting state and Federal standards, the prospects of controlling pollution in the textile industry are good," a new National Industrial Pollution Control Council report asserts.

The report of NIPCC's General Manufacturing Sub-Council notes that the U.S. textile industry's total capital expenditures for existing treatment systems reached $44,556,642, according to a 1971 survey, and the total cost of planned expenditures for waste water treatment facilities was $29,310,000.

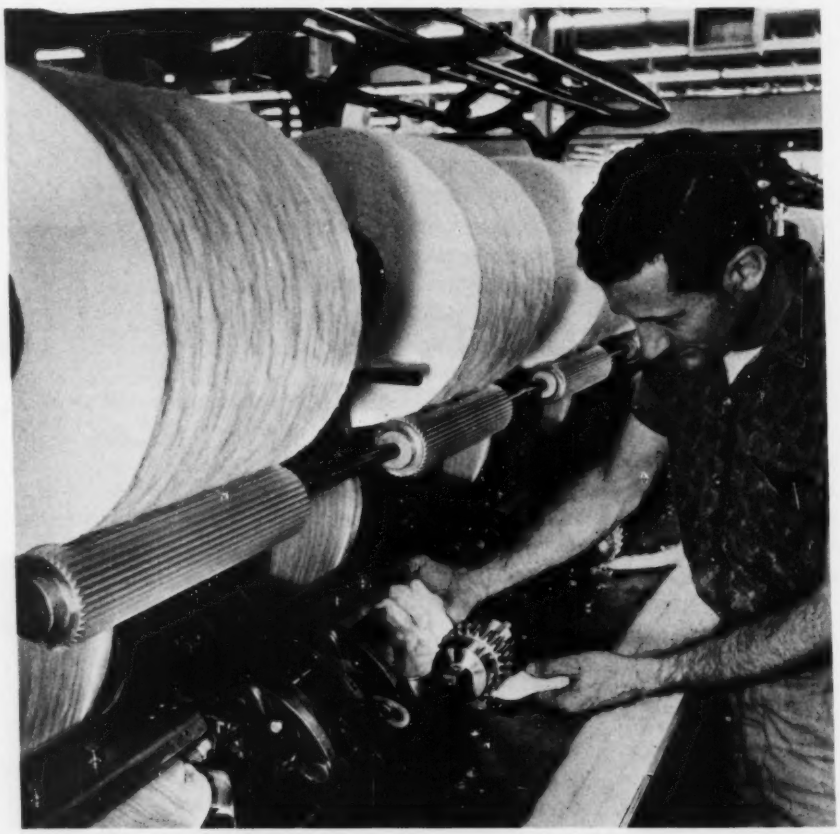
As intensity of regulatory attention to pollution problems has increased, the uncertainty surrounding the setting of standards has tended to make textile plant owners and managers reluctant to invest heavily in facilities until they were more assured of stable standards, notes the report, which summarizes progress that has been made in pollution abatement programs conducted by the textile industry.

Results of uncertainty

"The result of this uncertainty has been that many companies delayed building waste treatment systems that could have been in operation earlier," the report continues.

Asserting that "there is a great diversification of processes in textiles" which creates a problem for the industry, the report says:

"While some plants have found it necessary to construct extensive waste water treatment systems and buy elaborate equipment to prevent



COMBING—*A worker is shown operating a combing machine, one in a number of manufacturing processes. It removes short cotton fibers before spinning.*

contaminating particles from being released into the atmosphere, others have found that they have no problem at all."

Wastewater treatment

It has been estimated that the volume of waste water discharged by U.S. industry is approximately 45 billion gallons per day, or 12-13 trillion gallons annually.

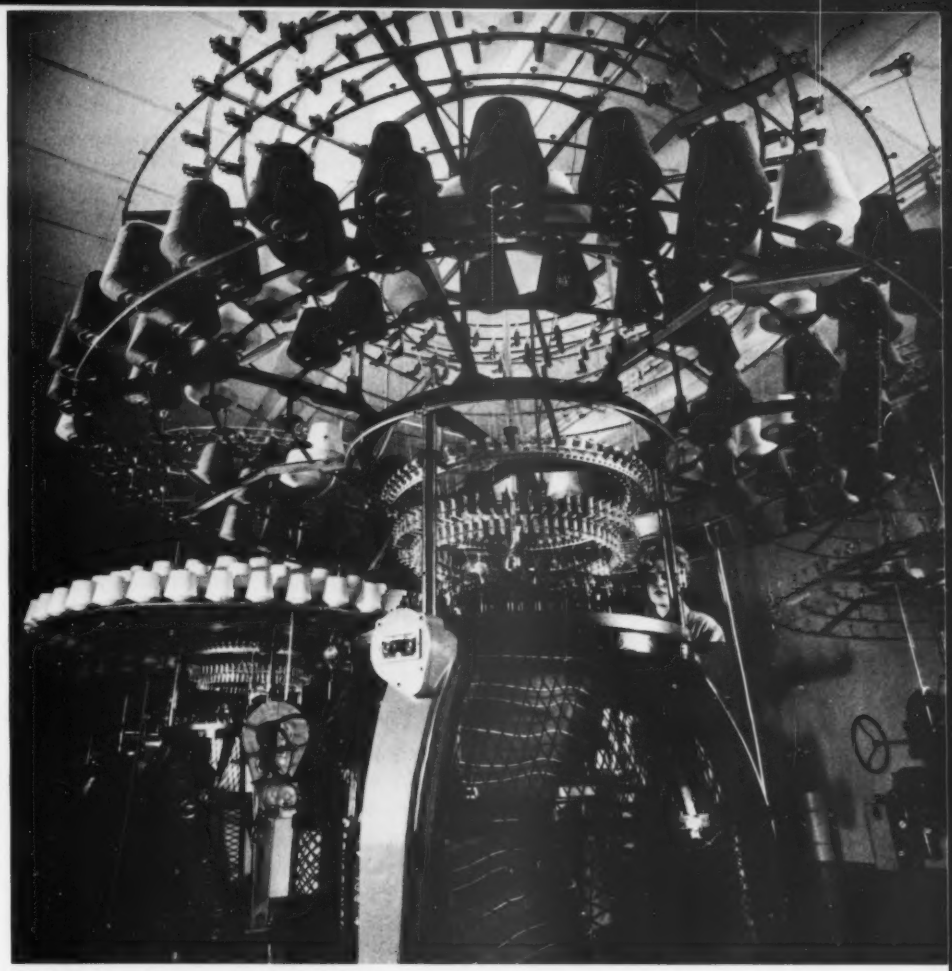
The report notes that the textile industry in this country discharges slightly more than 500 million gallons of water daily, or 125-135 billion gallons annually, which is approximately 1 percent of the total.

"While the U.S. textile industry thus contributes only a small part of the total water pollution problem, textile plants that use and discharge water are generally grouped together in New England, along the Mid-Atlantic Coast, and in the Southeast," the report states.

"It is this concentration of plants in several relatively small areas which make the water pollution problems of the textile industry important. Moreover, the chemicals and dyes used by textile plants in scouring, bleaching, dying and finishing create significant and troublesome wastes."

The textile industry is a major factor in the economy of the U.S. There are almost a million persons, with total earnings in excess of $5 billion annually, employed directly in the manufacture of yarns, woven and knit fabrics, and finished fabrics. Another 1.4 million are employed in the manufacture of apparel and related products, and it is estimated that still another two million are employed by suppliers.

There is a trend toward larger, integrated plants and away from smaller ones that have limited operations, the report notes. However, the structure of the industry remains its prime problem in pollution abatement. Variations between plants and processes prevent the establishment of standard procedures.



KNITTING—*One process in the manufacture of textiles is illustrated by this circular double knitting machine used for double knitted fabrics. This photograph by the American Textile Manufacturers Institute shows new and modern equipment found in a growing number of textile plants throughout the country.*

While the ultimate goal may be the same for everyone, the methods of achieving the goal may be quite different. The variety of compounds and chemicals used in wet processing means that each plant must treat its waste water in a way that may be entirely different from all others.

Matter of economics

Another problem that some textile companies have encountered, the report cites, is simply a matter of economics. Large corporations with more efficient plant complexes have better access to the capital to construct adequate waste treatment facilities than do smaller and more marginal firms.

Moreover, the smaller firms may find such an investment to be a high percentage of its total capital investment. This tends to penalize small companies, making them still less competitive. One small plant, for example, had been discharging improperly treated waste, and found it more practical to pay for wet processing done at another location than to build a treatment system of its own.

The textile industry has shown determination to resolve its problems of air and water pollution, the report concludes.

The report was signed by Alexander H. Galloway, chairman of R. J. Reynolds Industries, Inc., and chairman of the General Manufacturing Sub-Council. Other Sub-Council members are William S. Brewster, chairman and president of USM Corp., Alvin T. Leonard, chairman, Superior Plating, Inc.; Raymond L. Springer, president, Auto Sun Products, Co., Inc., and J. F. Torley, president, The Dayton Malleable Iron Co.

Federal Building Will Demonstrate How To Design For Energy Crisis

The construction industry today must concern itself with more than erecting buildings that will fulfill the needs of their owners. It must also build for tomorrow, producing buildings designed to conserve energy, protect the environment, and safeguard the building occupants.

The recent energy shortage has suggested a larger crisis faced by this country today. Buildings across the country were in many cases forced to cut down their temperatures and in other incidents compelled to change their fuel from low-pollutant oils to coal fires just to keep their people warm.

For example, 15 Federal buildings in Iowa, Nebraska and Missouri had to reduce their internal temperatures to 65 degrees. And at the Denver Federal Center in Colorado, one of the oil-gas boilers was converted to coal.

The need for energy conservation features to be included as part of a building design has been a concern of the Federal Government long before the energy crisis loomed this winter. In fact, a building project designated to be an energy conservation demonstration project has been in the design and drawing board stage since last spring.

The project is a result of the National Bureau of Standards-GSA Energy Roundtable held in Maryland last May. This conference brought together leading designers, executives and Government officials with responsibilities in all phases of building construction, design and management. The meeting's express purpose was to stimulate a free flow of ideas and the best techniques available for constructing and using buildings in such a manner as to conserve energy.

Among the conclusions of the Roundtable was the estimate that buildings designed specifically for energy conservation—using some or all of the techniques discussed during the seminar—could reduce energy consumption in their operations by at least 10 to 20 percent.

Arthur F. Sampson, the Acting Administrator of GSA, announced the decision of his agency to construct such a building. It will be erected in Manchester, N.H., and it is currently in an extensive design phase to allow for maximum research and development of its conservation concepts. The building has been specified as the Energy Conservation Demonstration Project. It will be built with a gross area of 175,000 square feet, house Manchester offices of 11 Federal agencies having approximately 418 employees, rise five to eight floors in height, and contain a two-level parking garage for approximately 120 vehicles.

Sampson said that by embarking on this project the Federal Government is not only demonstrating its firm commitment to the conservation of energy in the design, construction and operation of Federal buildings, but providing a laboratory for the installation of both recognized and innovative energy techniques.

"It will be a living test ground," he said.

And he added that he has high hopes that this project will inspire others in the construction industry to pursue energy conservation as a goal.

Brainstorming, relative to energy conservation, was begun with more than 20 professional groups, trade associations, Federal agencies, utility companies and manufacturers. Energy conservation ideas are being compiled from the NBS-GSA Energy Conservation Roundtable, the Architect-Engineer, the Energy Conservation Consultant for the project, GSA, and numerous colleges and universities.

The firm of Nicholas Isaak and Andrew C. Isaak of Manchester, N.H., is the Architect-Engineer and the firm of Dublin-Mindell-Bloome Associates of New York, N.Y., is the Energy Consultant. It is their primary responsibility to evaluate the many ideas relative to features-systems-equipment that have been suggested for the conservation project and to recommend those ideas that appear to be productive in conserving energy.

The Commerce Department's NBS is performing special computer studies linking the impact of the several possible building configurations, orientations, fenestration patterns and the amount of insulation on the energy requirements of the building.

Important features

Important features that are expected to be demonstrated in the building include:

- Utilization of a regenerative ventilation system that will recover heat from exhaust air.
- Design of the building to incorporate natural light penetration and natural ventilation.
- Design of electrical systems to reduce energy consumption, such as a flexible lighting system that will permit the location of lighting sources over work areas, with lower lighting levels located elsewhere.
- Orientation of the building to reduce solar load.
- Utilization of landscaping and

Arthur Sampson
GSA Acting Administrator

building shading to cut energy consumption.

In addition, the building will have various heating and air conditioning systems, designed to conserve energy and NBS will cooperate in instrumenting the building to actually test its effectiveness.

An overall savings of 20 percent in energy use is expected—as compared to comparable buildings now in existence.

All the energy conservation features found to have merit for the Manchester Project will be incorporated in the design of other Federal buildings.

A complete evaluation of all the energy conservation features, systems and equipment to be incorporated in the Manchester buildings will be approved this month, with complete working drawings expected to be finished by January of 1974. The construction of the building is planned to be completed before the end of 1975.

Machine Tool Industry Having Banner Year

The need for increased productivity and modernized manufacturing plants will make 1973 a banner year in the U.S. machine tool industry, according to the Bureau of Competitive Assessment and Business Policy.

Metal cutting and metal forming machine tool shipments are expected to advance 25 percent above 1972 to $1.5 billion, the Bureau's "U.S. Industrial Outlook 1973" predicted.

Present trends for investment in machine tools indicate that 1974 shipments will equal or exceed those of 1973, and, with a compound annual growth rate of 10.2 percent forecast, shipments will reach nearly $2.6 billion in 1980.

Machine tool shipments in 1972 rose 13 percent, reaching $1.2 billion and marking a healthy recovery for the industry from its seriously low levels of 1970 and 1971. Orders and shipments are expected to remain strong this year.

Communication Industry Continues To Pace Non-Manufacturing Group

Domestic and international telephone and telegraph communications are among the fastest growing nonmanufacturing industries in America, and will continue to be through this decade, Commerce's Bureau of Competitive Assessment and Business Policy forecasts.

"U.S. Industrial Outlook 1973" ranks international telephone and telegraph No. 1 and domestic operations of the industry No. 4, on the basis of revenue growth anticipated this year. International telephone and telegraph revenues are expected to increase 23 percent in 1973, reaching $900 million, while domestic telephone and telegraph revenues are projected at $29 billion for the year, up 14 percent from 1972.

Domestic telephone revenues in 1973 are expected to exceed $27 billion, up 13 percent from 1972, while domestic telegraph and data transmission services should enjoy a 16 percent rise in revenues to $1.45 billion, analysts of the Bureau's Office of Business Research and Analysis say. At a compounded annual growth rate of 11 percent, domestic telephone revenues are projected at $53.9 billion and domestic telegraph revenues, growing even faster (17 percent a year), at $5.1 billion by the end of the decade.

By the end of 1973 more than 138 million telephones are expected to be in use in the United States.

New plant investment by the domestic telephone and telegraph industries this year is forecast at $13 billion. That would increase their gross capital investment to $101 billion. Installation of new equipment and expansion of telephone and data services cost the domestic industry an estimated $11.4 billion last year.

The U.S. telephone and telegraph operating industry continued to expand its data transmission network in 1972 to meet increasing demands for service from banks, airlines, and federal, state and local governments.

On the international side, revenues from telephone service are expected to approximate $597 million in 1973, up 27 percent from the $470 million estimated last year. International telephone revenues are expected to total about $3.5 billion in 1980, reflecting a compounded annual growth rate of 29 percent.

An annual increase of 16 percent is forecast in international telegraph revenues — from $260 million in 1972, to $302 million in 1973, and $840 million in 1980.

These projections are predicated on success of research and development efforts by communications carriers at home and abroad to meet the demands of governments, industry and the general public.

Note For Federal Contractors

The Viet-Nam Era Veterans Readjustment Assistance Act of 1972 requires Federal contractors and first-tier subcontractors to list job openings with the United States Employment Service.

The primary purpose of this law is to expand the job opportunities that the Employment Service can make available to Viet-Nam-era veterans.

Business firms that are not affected by this directive can make a significant contribution to the Jobs for Veterans Program through voluntary support and implementation of the law's specifications.

Full details of the law can be obtained by contacting the nearest Employment Service or Regional Manpower Administration office.

Servicemen Abroad May Begin Job Training At Foreign Plants

Servicemen stationed overseas and soon to be discharged, may be able to train in the plants of foreign firms with operations in the United States if a program encouraged by the State Department and the Jobs for Veterans National Committee gets off the ground.

The purpose of the program would be to train servicemen in a civilian skill before they leave the military. But, secondarily, manpower trained in foreign firms might well help in advancing the "goal of attracting foreign investment to the United States," according to Secretary of State William Rogers. Rogers made the comment in a letter to Mario DeCapua, commercial attache at the U.S. Embassy in Switzerland. DeCapua originated the pilot training program for servicemen at a machine tool factory near Bern. And Charles Daly, Commerce representative on the Jobs for Veterans Committee, implemented the program.

Initial contact

Initial contact will be made with firms in Germany, England and Japan.

Embassy officials will serve as catalysts in the project, encouraging corporations, such as Volkswagen, which does extensive business in the United States, to train servicemen serving in Germany as repairmen and other technicians in the United States.

A willing company will then be brought into contact with the Transition Program officers within the military command in that country. Company and transition officers will work out details of the training curriculum.

The idea for the new program springs from the overall jobs for Veterans program which has focused attention on the necessity for training men before they leave the service as a crucial element in licking the veteran unemployment problem.

A pilot program in Switzerland may have cemented interest in the idea. The Buser AG Machine Tool Co., near Bern, has been training—for about 18 months—a few veterans as repairmen for its textile printing machines. The specialized machines are used extensively in North and South Carolina and parts of New England where there is a heavy concentration of textile mills.

New directive

The State Department directive urged embassy officials in Bonn, London, and Tokyo to be in touch with Transition Program officers to determine the extent that men in a particular military command might be able to participate in such training. Embassy officials are then urged to "contact the appropriate foreign firms having U.S. operations and subsidiaries and determine their needs and requirements for training service personnel in skills which will lead to permanent employment in the United States."

Firms unable to provide training will be asked, according to the directive, if qualified servicemen interested in working in their U.S. subsidiaries might interview with the parent company before they are discharged and start the return trip home.

Other programs

This is one of a number of stepped up programs to aid returning veterans in finding jobs in civilian life. The programs, coordinated by the National Jobs for Veterans Committee, include Job Information Fairs sponsored throughout the country by the Department of Defense, local organizations, the National Alliance of Businessmen and the JFV National Committee.

Representatives of 16 major industries and associations will be assigned to each of 31 military hospitals accommodating prisoners of war, to act as liaison in finding civilian jobs for the men.

Companies participating in the Industry Committee on POW Employment are General Motors, General Electric, IBM, Westinghouse, Cummings Engine, Xerox, Travelers Insurance, Bell System, Firestone Tire and Rubber, United Parcel, Bankers Trust, Exxon, J. C. Penney and Goodyear Tire and Rubber. Associations are the National Association of Home Builders and the International Association of Chiefs of Police.

Cable TV May Reach More Than 23 Million U.S. Homes By 1980

America's cable television industry (CATV) may reach eight million subscribers by the end of this year and triple the 1973 total by the end of the decade, Commerce's Bureau of Competitive Assessment and Business Policy has predicted.

The agency's 1973 U.S. Industrial Outlook reports that cable television has embarked on a new era of expansion following the March 31, 1972, issuance of new rules which freed the industry from some uncertainties and restrictions that previously hampered its growth.

Subscriber revenues for 1972 are estimated at $390 million and are expected to reach $470 million in 1973, an increase of about 20 percent.

By 1980, the total number of subscribers may reach 23.5 million. This represents an annual increase rate averaging 16.5 percent for the rest of the decade.

Subscriber revenues for 1980 are expected to reach $1.7 billion, an increase rate of 20 percent per year.

Phase III Rules On Repricing, Mandated Cost Rises Detailed

Many businessmen have questions concerning Phase III and the implementation of the new voluntary system of wage and price regulations which applies to most sectors of the economy. The Cost of Living Council details some important aspects of the new regulations in a series of questions and answers.

Q. From what date may government mandated cost increases be used on a dollar-for-dollar basis to adjust customary initial percentage markups by retailers and wholesalers?

A. Retailers and wholesalers in the food industry may increase their customary initial percentage markups to reflect government mandated cost increases on a dollar-for-dollar basis for such increases incurred on or after Jan. 1, 1973. Retailers and wholesalers of items other than food may use the procedures applicable to food sales as a guide in their pricing decisions.

Q. Is inventory repricing allowed?

A. Price Commission regulations and rulings in effect on Jan. 10, 1973, as to inventory repricing are still in effect for firms subject to mandatory controls, and are available as guides to firms in the voluntary sector in applying the general price standards to their own situations.

In general, those Price Commission rulings permitted a retailer to use any pricing method to reprice inventory which did not result in a maximum selling price for any item which exceeded the price which would have resulted from applying his customary initial percentage markup to the actual (landed) cost of merchandise. Once a wholesaler determined costs through the inventory cost accounting method normally utilized, the sale price became fixed and determined when the item or category of items was offered for sale.

Q. Are firms with fiscal years beginning in Phase II but ending after Jan. 11, 1973, subject to the Phase II or Phase III profit margin regulations?

A. Firms with fiscal years ending after Jan. 11, 1973, are subject to the Phase II standards and to the Phase III reporting and record-keeping requirements for those quarters of the fiscal year ending after Jan. 11, 1973.

Q. Under Phase II those firms which never raised prices above Phase II base prices were eligible to submit quarterly Certificates of No Price Increase in lieu of other reporting requirements. Is this practice available to firms subject to Phase III reporting requirements?

A. Yes. These reports should be submitted to the Cost of Living Council in lieu of toer reporting requirements.

Q. How should volume be taken into account under Phase II rules applicable to firms in the voluntary sector?

A. The principles and policies contained in the Phase II regulations, including the policies with regard to volume, should be used in applying the standard. Where estimating is involved, the firm should maintain documentation adequate to justify its estimates.

New Plan Helps Small Firms Avoid Disaster

Ninety thousand clients of the Small Business Administration are being offered a business plan that can be used to increase profits and improve their operations.

"Business Plan for Small Retailers," designed as a preventive measure against small business failures which occur in nine out of 10 starts, is a new form of free management assistance to small firms.

Its benefits are as a guide to profit for the small businessman, as an acceptable presentation which makes borrowing money easier, a handy tool for communicating with business associates, and a means of increasing owner-manager ability to make judgments advantageous to better business.

Calendar For Businessmen

March 11-23—South Bend, Ind.—International Council of Shopping Center Executive Development Institute at Notre Dame University. For information, Lee A. Roberts, Assistant Director, Council of Shopping Centers, Urban Affairs Department. Phone: 212-421-8181.

March 13-14—New York—Second National Training In Business and Industry Conference. For information, William A. Kulock, Phone 212-687-8540.

March 16 — Castine, Me. — Maine Maritime Academy Annual Symposium, speakers to include Howard F. Casey, Deputy Assistant Secretary of Commerce for Maritime Affairs.

March 30—Los Angeles—Business Opportunity Federal Procurement Conference, sponsored by Rep. Charles Wilson and the South Bay, Gardena Valley and Centinela Valley Chambers of Commerce. For information, Bill Pickens, Office of Rep. Wilson, 15305 S. Normandy St., Box 2062, Gardena, Calif., 90247. Phone: 213-323-4171.

April 23-May 11—Detroit—Institute for Minority Business Education Basic Training Course, sponsored by IMBE, Howard University, Washington, D. C.

April 30-May 5—New York—Second National Consumer Information Week, sponsored by the Council of Better Business Bureaus.

SCIENCE & TECHNOLOGY REPORT

- **Illinois forum to expose industry to university technology**
- **Electronic detectors to be deployed in 15 cities**
- **Agencies alert lakeshore industry to growing flood threat**
- **Anti-pollution patents number 2,160 since priority program began**
- **Patents of special interest**

Seabed Probe To Test Ore, Oil Theory

An intensive, four-month investigation of the earth's crust has begun off the west coast of South America to test the hypothesis that much of the world's resources of nonferrous ores are located in modern or suspected ancient zones where the giant crustal plates converge.

Despite the widespread acceptance of global tectonics in the earth sciences, there is only limited knowledge regarding the complete cycle that takes place and of the degree to which these new tectonics theories can guide practical investigations of minerals and petroleum.

The investigation is a cooperative effort of Commerce's National Oceanic and Atmospheric Administration, the Hawaii Institute of Geophysics, Oregon State University, the Geophysical Institute of Peru, and the University of Chile's Department of Geophysics and Geodesy.

Scientists from NOAA's Environmental Research Laboratories in Seattle, Wash., are in charge of the expedition. They, along with scientists from Peru and Chile, will work from the NOAA Ship *Oceanographer*, an oceanographic floating laboratory based at Seattle. The Hawaii Institute of Geophysics' research vessel *Kana Keoki* will also be used.

Centers on Nazca Plate

The investigation is sponsored by the National Science Foundation as part of the International Decade of Ocean Exploration.

The investigation is centered on the Nazca Plate which is bounded on the west by the East Pacific Rise, a 3,000-foot-high underwater mountain range, and on the east by the Peru-Chile Trench, a deep chasm in the seabed off the South American coast. The water in the area is about 15,000 feet deep.

According to the global tectonics theory, the eastern edge of the Nazca Plate is moving into the earth along the Peru-Chile Trench. While this is going on, molten rock from the earth's interior is moving through the East Pacific Rise and forming new sea floor. The new material spreads generally west toward the mid-Pacific and east toward South America. This spreading is one explanation for continental drift, the theory that as the plates move, they carry the continents with them.

One of the more interesting as-

pects of the investigation involves a detailed study of the ocean area near the location of the 1970 earthquake which took more than 70,000 Peruvian lives in the worst natural disaster in the history of the Western Hemisphere. This is the area where the Nazca Plate converges on the Peru-Chile Trench, one of the world's major earthquake zones.

Purpose of the investigation is to study in detail the processes of crustal formation and the destruction of the sea bed that takes place as it is sucked into the earth. The expedition will undertake geophysical, geochemical, and marine geological studies of the Nazca Plate's two edges and attempt to link these events and processes by geophysical studies of the structure and changes of the intervening plate.

—NOAA

Illinois Forum To Expose Industry To University Technology Programs

University and technological research centers will, for the first time, have an opportunity to present their developments to representatives of U.S. and foreign industry in Chicago April 2-6 at the Illinois Institute of Technology Research Center.

Developments in all scientific and engineering areas as well as a general program that will deal with the aspects of working relationships between the universities and industry will be covered during a forum sponsored by Dr. Dvorkovitz & Associates, an international agency for technology transfer in Ormond Beach, Fla.

The meetings are designed to give industry representatives an opportunity to meet key representatives and evaluate the technology of almost every university and research institute doing significant work of potential value to industry.

Further information may be obtained from the Dvorkovitz firm at P.O. Box 1748, Ormond Beach, Fla., 32074.

Electronic Detectors To Be Deployed In 15 Cities Along 'Tornado Alley'

Electronic "tornado detectors" are to be deployed again this year in the "tornado alley" of the United States in an effort to reduce the time between detection, warning, and emergency action following tornadic storms.

The project is conducted by the Wave Propagation Laboratory, one of the Boulder, Colo.-based Environmental Research Laboratories of Commerce's National Oceanic and Atmospheric Administration, and NOAA's National Weather Service and its National Severe Storms Forecast Center in Kansas City, Mo.

Instruments are to be installed at Weather Service stations in Amarillo, Lubbock, and Fort Worth, Texas; Oklahoma City and Tulsa, Okla.; Little Rock, Ark.; Memphis, Tenn.; Jackson, Miss.; Tampa, Fla.; Grand Island, Nebr.; Des Moines, Iowa; Topeka and Wichita, Kans.; and Springfield and St. Louis, Mo. These sites lie along "tornado alley," the curved seasonal path followed by the center of maximum frequency of tornadoes.

This year's effort follows experiments in 1972 which provided what scientists called "positive results" using the detectors.

Cloud systems

William L. Taylor, who leads the project for the Wave Propagation Laboratory, says the instruments measure an electromagnetic "signature" of processes in cloud systems where tornadoes are likely to occur, rather than the presence of tornadoes themselves.

"Our work," he notes, "is similar to other Wave Propagation Laboratory projects. We're trying to measure, in ways that meteorologists can put to use, the interac-

DETECTING THE WHIRLWIND—*Cities within "tornado alley" of the U.S. will get electronic tornado detectors this year to reduce the time between detection and emergency action when the violent storms hit any community. All 50 states see about 659 tornadoes yearly, about half of them during spring.*

tions between atmospheric events and various regions of the electromagnetic energy spectrum. The tornado work is based on the numerous observations of electrical phenomena reported in connection with tornadic thunderstorms, and with data we have been obtaining from experiments over the past few years.

"What we are measuring here is apparently one symptom—the electrical one—of what might be called a storm's tornado syndrome, rather than a signal generated by the tornado itself," adds Taylor. "We've been zeroing in on this signal for several years now and, in 1972, felt ready to field 15 instruments to see what kind of results we would get."

High-rate bursts

Based on earlier experimental results, the instruments installed in "tornado alley" in 1972 were tuned to a region of the spectrum where certain types of storms generate high-rate bursts of electromagnetic energy. Moderate thunderstorms produce an average burst rate of about three per minute, severe storms with related hail and wind damage produce about 10 bursts per minute, severe storms associated with funnel clouds, about 13 bursts per minute, and severe storms that produce tornadoes, about 20 bursts per minute.

The major difference in this year's deployment of instruments comes from the major disadvantage reported by weathermen for the 1972 experiment. Then, each instrument had to be interrogated by telephone by meteorologists when these meteorologists had the least time for interrogation—usually when a severe storm was bearing down on their areas of responsibility. This year, the instruments will operate continuously, and can be easily monitored by weather forecasters when conditions warrant.

Tornadoes are the most violent winds on earth, and can be among the most destructive of life and property. On the average, the U.S. sees about 659 tornadoes a year, about half of them during April, May, and June. More than 80 percent occur between noon and midnight, with the greatest concentration of these occurring between 4 and 6 p.m.

They occur in all 50 states but no area is more favorable to their formation than the continental plains of North America, and no season is free of them.

The nation's round-the-clock watch for severe storm development is kept by the National Severe Storms Forecast Center in Kansas City, Mo., one of several environmental hazards centers-of-action operated by the National Weather Service.

—NOAA

Agencies Alert Lakeshore Industries To Growing Flood Threat Problem

Business and industry along the shores of Lake Erie, the Detroit River, Lake St. Clair, Saginaw Bay on Lake Huron and Lake Ontario have been alerted that an almost unprecedented flood threat continues unabated.

In serious but less danger are shores of the rest of Lake Huron and Lake Michigan. Least threatened is Lake Superior, largest and deepest of the Great Lakes.

The Lake Survey Center of Commerce's National Oceanic and Atmospheric Administration (NOAA) has announced that Lake Erie and Lake St. Clair remain at the highest levels on record for mid-winter. Their levels are expected to continue at record highs through July of this year.

Storm surges

Some lakeshore residents experienced a sample of the flood problem last November when strong winds piled up Lake Erie's water at its western end causing $22 million in property damage. Such "storm surges" of wind-driven water, on top of already-record lake levels, are the principal worry. Meteorologists of NOAA's National Weather Service say a stronger wind than that of last November 14 could produce a storm surge several feet higher. The pile-up of water can occur on any shore depending on the direction of the wind.

To meet the threat, a number of Federal agencies are joining with state and local officials in a Great Lakes preparedness campaign patterned after Operation Foresight in 1969, estimated to have averted about $150 million in damage from snowmelt flooding in the upper Mississippi and Missouri River basins.

Minimize the effect

Already, the Army Corps of Engineers has held a number of meetings with state and local officials to gear up for the threat, offering advice on ways to minimize the effect of flooding. More preparedness meetings are planned. Other Federal agencies involved include NOAA's National Weather Service and Lake Survey Center, the U.S. Coast Guard, and the White House Office of Emergency Preparedness, which will take over if the President declares an affected community a Federal disaster area.

Primary cause of the present high levels in the Great Lakes is above-normal precipitation over the past eight years—ranging from 4 percent to 9 percent, depending on the basin. In 1972, precipitation ranged from 8 percent above normal for Lake Superior to 27 percent above for Lake Ontario. Waterlogging of the soil has accelerated the rise by adding to and hastening runoff.

Forecasters of the National Weather Service are receiving a constant flow of lake-level obser-

vations from NOAA's Lake Survey Center. With this information, whenever there is a likelihood of strong, sustained winds over critically high lakes, forecasters are ready to provide computer-assisted predictions of storm surges in advance of the rising water. These will be labeled "lakeshore warnings" and transmitted on Weather Service teletype circuits for relay to the public by newspaper, radio and television. NOAA's VHF radio weather stations also will broadcast the warnings on a round-the-clock basis on 162.55 or 162.40 MegaHertz.

Lakeshore residents are being advised in advance through community-preparedness meetings that the inundation of water may be accompanied by powerful, battering waves capable of damaging many structures. Large chunks of ice could be an added peril.

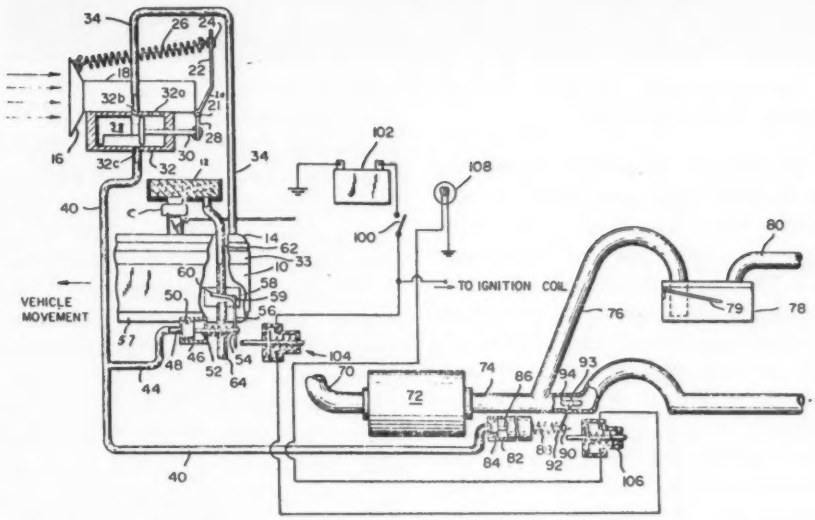
Local public-safety officials may recommend evacuation of low-lying areas in advance of an impending storm surge. —*NOAA*

Moratorium On Fisheries Loans Put Into Effect

Until further notice, Commerce's National Oceanic and Atmospheric Administration will not accept applications for loans from the Fisheries Loan Fund. The loans are made for financing or refinancing the cost of purchasing, constructing, maintaining, repairing, equipping, or operating commercial fishing vessels or gear, when loans are not available through usual sources.

The loan program is administered by the National Marine Fisheries Services, a NOAA component. NMFS Director Philip M. Roedel said the aggregate amount of outstanding loans, applications on hand or anticipated, plus actual or contingent expenses make it impossible to conduct a meaningful program until scheduled collections restore the available capital.

Details on the moratorium on fisheries loans were published in the "Federal Register" Feb. 20.



ANTI-POLLUTION PATENT—*A vehicle engine emissions control system is one of the recently-patented devices processed under the accelerated program of the U.S. Patent Office to give priority to those patents aiming to improve the environment.*

Anti-Pollution Patents Number 2,160 Since Priority Program Began

Since 1970 when a program was begun to expedite the processing of anti-pollution inventions, Commerce's Patent Office has approved 982 patent applications for accelerated treatment, Patents Commissioner Robert Gottschalk reports.

Of that specially-processed number, he added, 373 have been approved for issuance by patent examiners raising the total number of environmental patents approved during the three-year period to 2,160.

The priority program for anti-pollution inventions was established February 17, 1970, in response to a request from President Nixon in his environmental message to Congress. He directed the Patent Office to give special priority to the processing of applications for patents which could aid in curbing environmental abuses and problems.

Any inventor with an invention which can aid in improving the environment may apply for this special status by writing the Commissioner of Patents and identifying the application by serial number and filing date, and sending with the request an explanation of how the invention will contribute to cleaning up the environment.

"As compared to 25 months for the average patent to issue, we are completing the examination and processing of these special priority cases in a six to eight-month period," Commissioner Gottschalk said.

Environmental patents issued under the accelerated procedure have included solid waste incinerators, refuse destructors, waste treatment systems, gas purification devices, anti-smog and exhaust devices, and sewage treatment methods, to mention a few.

A list of the patents may be obtained by writing the Commissioner of Patents, Washington, D.C. 20231, Attention: Office of Information Services.

—*Patent Office*

282 Earthquakes Reported

The National Earthquake Information Center received reports of 282 earthquakes in 22 states during 1972 but no lives were lost as a result. California reported 117 of these and Alaska, 113. Montana was third with 19.

Patents Of Special Interest

Recent patents issued by the U.S. Patent Office included:

Furniture bleaching apparatus. A method and apparatus is utilized for bleaching furniture through the use of hydrogen peroxide and ammonia. The furniture to be bleached is placed on a conveyor which passes through an air lock structure into an ammonia chamber. Ammonia is delivered to the ammonia chamber and causes the bleaching of the furniture. The bleached furniture component is removed from the ammonia chamber through an air lock structure. Patent No. 3,708,-889 issued to John W. Baymiller, Lancaster, Pa., and assigned to Armstrong Cork Company, Lancaster.

Adapter for television camera. An objective housing, containing zooming mechanism including a motor for adjusting its varifocal lens assembly, has its rear wall fitted with a socket for engagement by an electrical connector or an adapter plate which is similarly connected to an electric outlet for a TV camera to be coupled with the objective by means of this plate. A central aperture in the adapter plate gives passage to light rays entering the camera through the lens assembly. Patent No. 3,709,133 issued to Karl Gunter Hess, Waldlaubersheim, and Kurt Werner, Munster-Sarmsheim, both of Germany, and assigned to Jos. Schneider & Co. Bad/Kreuznach/Rhineland, Germany.

Method and apparatus for cleaning vessels afloat. Method and apparatus for cleaning the underwater hull surface of a floating vessel. Hull cleaning means is arranged in a path along the hull and yieldable carrier means is disposed in supporting relationship with the cleaning means. Means are provided to create relative movement between the vessel and cleaning means. In one embodiment a pincer unit is provided to deflect the tensioned return reach of an endless conveyor and utilize the resulting reaction force for urging the working reach into conformity with the hull surface. In another embodiment vertically spaced actuator arms yieldably urge rotary or belt-type cleaning means into conformity with the hull. In another embodiment a number of rotating float elements with peripheral cleaning bristles are arranged in series along a path adjacent the hull surface. In another embodiment flexible, inflatable containers are provided with cleaning means on their inwardly confronting working sides and support means holding the containers to the working sides yieldably conform to the hull surface of a vessel moved between the containers. Patent No. 3,709,-178 issued to Herbert M. Piker, and others of Jacksonville, Fla., and assigned to Farenwald Enterprises, Inc., Lancaster, Pa.

Abstracts and drawings of patents are published as they are issued in the *Patent Official Gazette* each Tuesday. More than 1,600 patents are issued each week. Trademarks are published in the *Trademark Official Gazette*. Copies of the *Patent Official Gazette* and the *Trademark Official Gazette* may be obtained from the Superintendent of Documents, GPO, Washington, D.C., 20402.

Science Calendar

March 14-16—Chicago, Ill.—Conrad Hilton Hotel. Industrial Water & Pollution Conference and Exposition. Sponsored by Water and Wastewater Equipment Manufacturers Assn.

March 19-21—Gaithersburg, Md.—National Bureau of Standards. National Roofing Technology Conference.

March 23-25—Hill City, Kan.—Mid-America New Ideas Fair, Graham County Fair Grounds. Information: Hill City Chamber of Commerce, Hill City, Kan.

March 27 — Gaithersburg, Md. — National Bureau of Standards. ANSI Committee on Consumer Education. Contact: T. W. Lashof, 921-2983.

April 2-6—Chicago—Illinois Institute of Technology. A national congress on "The Availability of New Technology In Industry From American Universities and Technological Institutes."

April 4—Gaithersburg, Md. — National Bureau of Standards. Minicomputer Symposium. Contact: Eric Swarthe, 921-3545.

April 4-7 — San Mateo, Calif. — Northern California Industrial Exposition, Hall of Inventions. Information: Northern California Industrial Exposition, Freeman and Associates, 77 Jack London Square, Oakland, Calif.

April 9-10 — Gaithersburg, Md. — National Bureau of Standards. Federal Information Resources Conference.

April 23-26 — Washington, D.C. — Sheraton Park Hotel. American Physical Society. Contact: K. G. Kessler, 921-2001, or W. R. Tilley, 921-2493.

April 23-May 11—Detroit—Institute for Minority Business Education Basic Training Course, sponsored by IMBE, Howard University, Washington, D. C.

May 6-11—Hartford, Conn. — Annual meeting of the National Conference of States on Building Codes and Standards. Contact: NCSBCS Secretariat, Center for Building Technology, NBS, Washington, D.C., 20234.

May 8-9—Gaithersburg, Md.—National Bureau of Standards. Color & Appearance Symposium. Contact: T. W. Lashof, 921-2983.

INTERNATIONAL COMMERCE REPORT

- **Study of U.S. multinational firms by Tariff Commission**
- **Trade mission report: metalworking equipment in Far East**
- **1972 U.S. trade, by major world areas**
- **Reports from U.S. overseas Trade Centers, exhibitions**
- **Commerce Department trade promotion schedule**

New U.S., China Offices Will Aid Traders

An increase in trading activity between the United States and the People's Republic of China is expected as a result of the agreement, announced Feb. 22, to establish an American liaison office in Peking and its Chinese counterpart in Washington.

The joint communique of the two governments noted that a year has passed since the visit by President Nixon to the People's Republic and that progress has been made in that time toward a betterment of mutual relations. It then declared:

"The two sides agreed that the time was appropriate for accelerating the normalization of relations. To this end, they undertook to broaden their contacts in all fields. They agreed on a concrete program of expanding trade as well as scientific, cultural and other exchanges.

"To facilitate this process and to improve communications, it was agreed that in the near future each side will establish a liaison office in the capital of the other. Details will be worked out through existing channels."

Dr. Henry A. Kissinger, Assistant to the President for National Security Affairs, who visited Peking earlier in February and led the U.S. team in the talks that preceded the agreement, discussed some of its implications for increased trade.

Dr. Kissinger said the amount of trading between the two countries since channels had been opened in the wake of President Nixon's visit "has proceeded more rapidly than anybody projected two or three years ago."

He said that a necessary first step in the new "concrete program" mentioned in the joint communique would be discussions leading to settlement of outstanding claims by private U.S. citizens against the People's Republic and freeing of blocked Chinese assets in the U.S.

"The private claims are in the neighborhood of $250 million. The blocked assets are in the neighborhood of $78 million," Dr. Kissinger explained at a Washington press conference. "But this may vary slightly because we are not sure we know all the claims or all the blocked assets."

Discussions of this matter have begun between Secretary of State William P. Rogers and the Chinese Foreign Minister in Paris, where they are attending the International Conference on Vietnam.

Dr. Kissinger said both sides would move quickly to set up the liaison offices: "Both sides will make proposals within the next few weeks to the other about their technical requirements, and henceforth it will be possible for the United States and the People's Republic of China to deal with each other in the capital of the other."

U.S. Multinational Companies' Effect On Trade, Jobs Weighed In Study

U.S.-based multinational companies are important in world trade but they do not dominate it, because the bulk of their foreign output is sold locally in the countries where it is produced.

That is one of a number of conclusions in a massive new 930-page study of multinational companies (MNCs) prepared by the U.S. Tariff Commission for the Senate Finance Committee.

By contrast, the study notes, U.S.-based direct investors exert a significant influence on the rates and patterns of fixed capital formation in many host countries. This is said to be particularly true of manufacturing industries in the major industrial nations, where many major industries are seen dependent on capital formation by U.S. owners as a principal source of growth and dynamism.

U.S. jobs: gain or loss?

On the widely-argued question of whether employment in the U.S. is hurt or helped by the worldwide activities of the MNCs, the report says that no conclusive answers are possible, because the process of seeking the answers must start with hypothetical assumptions.

These "ifs" relate to where the present overseas production facilities of the MNCs would be located in the MNCs absence. Differing assumptions can lead to estimates that differ by as much as 1.8 million jobs, it is contended.

The report states that "The most pessimistic estimate assumes that if there were no U.S. plants abroad, foreign countries would not replace the output of those U.S. plants with local production but would import the entire output from the United States. Under these assumptions, the presence of U.S. plants abroad represents a net loss of 1.3 million U.S. jobs" in manufacturing.

The report also includes an estimate of labor impact made on the assumption that "in the absence of the U.S. MNCs, foreigners would not have substituted their own plants for those of the MNCs, but that U.S. exports could reasonably be expected only to have maintained the shares of world exports of manufactures that they held in 1960-61, rather than to have taken completely all the markets served abroad by the MNCs' affiliates. Under these assumptions, the net employment effect in manufacturing shows a gain of roughly half a million U.S. jobs."

Effect on trade

With regard to U.S. trade, the report makes an attempt to determine whether the MNCs displace domestic production by importing more from their affiliates, and whether they hamper U.S. exports by using affiliate output to serve foreign markets.

The report notes that "The MNCs could be affecting changes in U.S. exports and imports in either or both of two ways: 1) through their 'direct' effect . . . in their own export and import performance, in shipments from and to the United States; and 2) through their 'indirect' effect, which is the substitution of foreign affiliates' production for U.S. exports in foreign markets."

These two effects are estimated separately and then combined, for all manufacturing industries and for 24 individual industrial subsectors.

The combined effect for all manufacturing, the report states, "shows the MNCs' impact on changes in U.S. trade from 1966 through 1970 to have been favorable by $2.9 billion in net new exports." The results varied widely among individual industrial subsectors. "There were 16 industries in which net increases of U.S. exports in the amount of $7.3 billion appeared; there were 8 industries in which net decreases (or net new imports) totaling $3.4 billion appeared."

Uses Commerce data

The report is based on primary data from Commerce Department's Bureau of Economic Analysis, a special census of MNC activity in 1966 and a sample survey that was taken in 1970.

The report, entitled "Implications of Multinational Firms for World Trade and Investment and for U.S. Trade and Labor," is for sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402, at $9.25 domestic postpaid mail or at $8.50 at GPO Bookstores.

Universal Copyright Rules Now Apply In Hong Kong

U.S. authors and publishers will now receive automatic copyright protection in Hong Kong for works originating in the U.S. and other countries parties to the Universal Copyright Convention.

To secure such protection for a work it is only necessary to show thereon the author's name, date of first publication, and symbol "c" in a circle. Hong Kong recently adopted the provisions of the United Kingdom Copyright Act of 1956 as its law, entailing protection in that colony for works originating in countries party to international copyright conventions. Copyright protection for an author's work in Hong Kong will extend for the author's life plus 50 years.

Protection is also obtainable in Hong Kong under another convention. Although the U.S. is not a member of the Berne Copyright Convention, a U.S. author who first publishes his work in a member country of this convention would also receive automatic copyright protection therefor in Hong Kong. The United Kingdom is a member of this convention.

OBSERVING OPERATIONS—*In Seoul, the metalworking equipment trade mission toured the Heavy Machinery Industrial Co., Ltd. Mission members Edward Perlman and Ford Cauffiel, fifth and sixth from left, above, and Jonathan Morey, extreme right, watch and listen as company officials explain what's happening.*

Far East Producers Seek Flexibility, Quality In Metalworking Equipment

U.S. metalworking equipment can offer Far East businessmen just what they are looking for—quality machinery and sophistication in production techniques.

Laying the groundwork for a substantial expansion of their exports, representatives of six U.S. firms reached this conclusion during a ten-day winter sales promotion tour to the Philippines, Hong Kong and Korea.

The trade mission, organized by the U.S. Department of Commerce, found that although price remains an important consideration for equipment users in these markets, producers are becoming more and more concerned with such factors as flexibility in machinery design and function, reductions in cost per unit, improved unit quality, standardization of output, and machine durability.

Offering a variety of heavy machine tools and accessory items, including used machinery, the executives found the three areas visited to be separate and distinct markets, with Korea and the Philippines more likely than Hong Kong as sale targets. For all three, orders during the next 12 months are projected at a total approaching $3 million. Ten agency agreements were under negotiation as the group returned to this country. Some pros and cons from the individual market appraisals follow.

Philippines: seeks diversity

The Philippines is experiencing significant unemployment and underemployment, and U.S. machinery could help provide the industrial diversification needed to relieve this situation. A number of Government infrastructure projects are underway to help support domestic expansion.

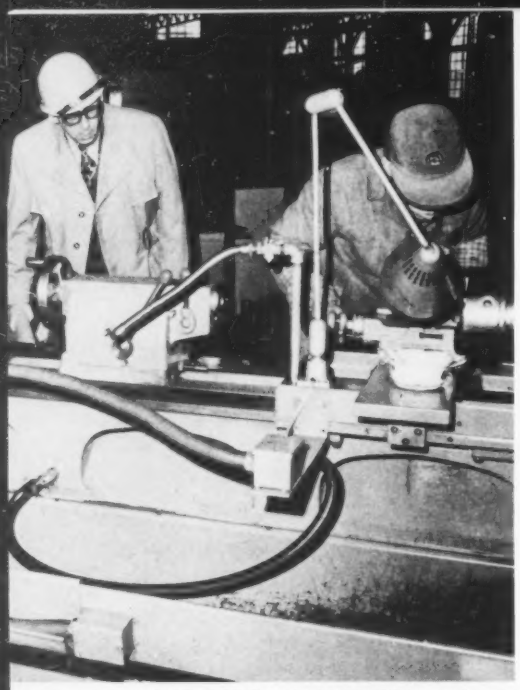
Mission member Kenneth Williams, Farrell Products, Costa Mesa, Calif., manufacturers of punches and dies, pointed to the small size of the Philippine market, but found "U.S. quality in demand, and a strong interest in buying our products." Ford Cauffiel, Cauffiel Machinery Co., Toledo, Ohio, also saw the market as favorable, though mentioning another limiting factor: Martial law conditions are hampering new business commitments at this time. "But I believe," he said, "there will be great opportunity in the Philippines, especially when its new steel mill begins operation and plants are built."

Korea: advanced technology

In Korea, governmental goals recently have been expanded to include a supportive role in the advancement of industrial technology. The mission members were invited to visit the Korea Heavy Machinery Industrial Co., Ltd., in Seoul. They observed that the factory incorporated advanced production line techniques, sophisticated technology, and modern machinery.

"I believe U.S. products can sell in this market provided you make contact with the people in the

INTERVIEW IN PHILIPPINES—*Mission member Kenneth Williams (left) explains advantages of his products to a prospective agent in Manila.*



A DIFFERENT OPERATION—*Also at the factory in Korea, a mission member looks on as plant official explains another precision step.*

plants that make up the specifications," said Charles E. Hanley, Thomas C. Wilson Co., Long Island City, N.Y. He believes financing problems can be overcome.

Hong Kong: labor shortage

Hong Kong is a prosperous financial center, regional office for many multinational corporations, and strong hub of tourist activity. Because skilled labor, land, and space are in short supply, labor-saving machinery is needed. Jonathan Morey, Morey Machinery Co., Astoria, N.Y., who developed good prospects for his kinds of used machine tools in both the Philippines and Hong Kong, commented, however, that the Colony—trading and light-industry center—is not a good market for heavy-duty tools.

Michael F. Butler, Commerce's Assistant General Counsel for Domestic and International Business, headed the group and William E. Dawson of the Department's Bureau of International Commerce served as his deputy. Edward C. Perlman, Mace Corp., New York, and Norris H. Wiggins, Pacific Roller Die Co., Hayward, Calif., rounded out the mission membership.

Hungarians Here For Trade Talks

Deputy Premier Peter Valyi of Hungary arrived in Washington Feb. 26 for a 10-day U.S. visit as the official guest of Secretary of Commerce Frederick B. Dent. Deputy Premier Valyi is the highest Hungarian official to visit the United States in more than two decades.

Deputy Premier Valyi said on arrival: "Our purpose is that after so many years of stagnation in our economic relations, to make some important steps forward in widening these relations.

"I don't make a secret of the fact that we must solve some serious problems but we have come with goodwill and desire that with mutual efforts we should be able to solve these problems.

"But foreign trade relations," he said, "have an exceptionally great percentage in our economic life. We are convinced that stable economic relations contribute to peace. Some of the first steps of this stable economic relation have been made, and we see perspectives for development and progress for the future."

Dr. Valyi, who served as Minister of Finance until he was appointed to his present position in May 1971, is one of Hungary's most respected economic leaders.

While in Washington Dr. Valyi was to discuss economic and commercial issues outstanding between the United States and Hungary with Secretary Dent and other high Administration officials. He will also meet with U.S. traders in New York.

Other Hungarian officials included in the delegation are: Janos Nagy, Deputy Minister of Foreign Affairs; Bela Szalai, Deputy Minister of Foreign Trade, and Janos Fekete, Deputy President of Hungarian National Bank.

TRADE VISIT—*Commerce Secretary Frederick B. Dent (right) and Hungarian Deputy Premier Peter Valyi (left) were introduced by Hungary's Ambassador to the U.S., Dr. Karloy Szabo, as Dr. Valyi arrived Feb. 26 for a 10-day visit in Washington as the official guest of Secretary Dent. Members of his delegation and senior U.S. Government officials are discussing economic and commercial issues of mutual interest.*

Indonesia Adopts BTN, Changes Tariff Rates

Indonesia reports adoption of the Brussels Tariff Nomenclature, effective January 31, and announces new tariff rates in selected areas. State Secretary Sudharmono, who announced the change in the tariff classification system, stated that the Geneva system previously used did not provide accurate classification for many modern products. The resulting difficulties of interpretation and application gave rise to bargaining between importers and customs officials and payment of bribes in return for assignment of low-duty tariff classifications to goods. Sudharmono said the Brussels system, by providing an accurate, systematic and comprehensive categorization of goods, will help eliminate such irregularities. It is also expected to have a beneficial effect on trade.

In addition to the tariff reclassification, the Government announced several changes in tariff and import sales tax rates. Tariff rates have been reduced on some essential, semi-essential and other items, while tariffs on certain luxury goods such as refrigerators and electronic equipment have been increased. The tariff on fully assembled automobiles is now 300 percent.

DISC Rules Hearing Set

Public hearings concerning Domestic International Sales Corporations (DISC) regulations will be held at 10 a.m. March 13 in Room 3313, Internal Revenue Building, 1111 Constitution Avenue, NW., Washington, D.C. The proposed regulations deal with requirements of a DISC, qualified export receipts and producer's loans, intercompany pricing rules (including marginal costing), foreign investment attributable to producer's loans, and other aspects of DISC operations.

Automotive Trade With Canadians Shows Surplus For U.S. In 1972

Automotive trade between the United States and Canada reached record heights in 1972 totaling $9.2 billion, with the U.S. achieving a net surplus of $38 million, its first surplus since 1969.

Almost all the trade in the automotive sector is covered by the United States-Canada Automotive Products Agreement of 1965 which provides for duty-free flow of motor vehicles and original equipment parts between the two countries.

As the accompanying table indicates, U.S. shipments to Canada scored gains in all product categories, with truck shipments registering the largest increases. U.S. imports from Canada were also substantially higher, most of the increase being concentrated in the truck and automobile parts sectors. The net U.S. surplus of $38 million compares with a deficit of $197 million in 1971.

The table utilizes the import statistics of each country and the actual transaction values, thus providing the most accurate measure of automotive trade between the United States and Canada. This method of measuring the automotive trade balance is necessary because the export statistics of both countries provide a less detailed breakout of automotive parts than are available in the import statistics, thus significant exports of automotive parts are not identified as automotive in both U.S. and Canadian trade statistics.

In addition, U.S. foreign trade statistics overstate the value of vehicle imports from Canada. These statistics are based on the customs valuation which records the transaction at the wholesale market price in the country of origin and not at the actual transaction price for which the vehicles are sold. The values for vehicle imports into the United States used in this table are adjusted to actual transaction values to remove the over-valuation. Similarly, imports of motor vehicles are reported on a transaction value basis.

The improvement in the U.S. net automotive balance with Canada reflects the high demand in Canada for automotive products and a slowdown in market penetration by vehicles from overseas countries. Consumer demand in Canada for motor vehicles is expected to remain strong in 1973 which should ensure a continuing high level of U.S. exports.

U.S.-Canada Trade in Automotive Products 1972[1]-1971

Adjusted for transaction values

Millions of U.S. dollars

	Jan.-Dec. 1972	Jan.-Dec. 1971
Canadian imports from U.S.[2]		
Cars	1,116	985
Trucks	516	334
Parts	2,951	2,448
Sub-total	4,583	3,769
Tires and tubes	50	36
Total	4,633	3,803
U.S. imports from Canada		
Cars	2,065	1,924
Trucks	713	587
Parts	1,795	1,481
Sub-total	4,573	3,992
Tires and tubes	22	8
Total	4,595	4,000
Net balance	+ 38	— 197
Snowmobiles in Canadian imports of trucks, above	33	22
Snowmobiles in U.S. imports of trucks, above	104	124

[1] Preliminary and subject to revision.
[2] Canadian import data converted to U.S. dollars at current exchange rate.
Sources: U.S. Bureau of Census; Statistics Canada.

U.S. Trade Position Worsens With Most Regions In 1972

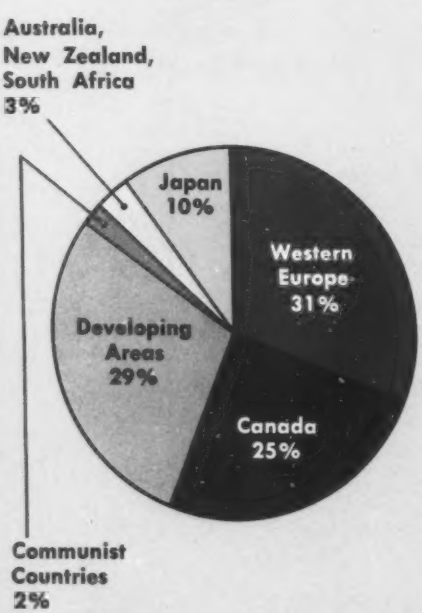
The large expansion in the U.S. foreign trade deficit in 1972 reflected a deterioration in this country's trade position with most major world areas. The greater part of the $4.3 billion adverse shift—from a $2 billion imbalance in 1971 to one of $6.3 billion last year—consisted of a worsening in the trade position vis-a-vis the developed countries. The balance with the developing countries also recorded a large negative swing, moving into a slight deficit for the first time in many years. On the other hand, a much larger merchandise surplus with the Communist countries was recorded.

Exports rose $5.7 billion to $49.2 billion last year, mainly as a result of greater shipments to the developed countries. These deliveries advanced by 13 percent, following a gain of only 2 percent in 1971. Sales to the economically less advanced countries climbed by nearly a tenth, while loadings for Eastern Europe, sparked by new trade agreements with the Soviet Union, recorded more than a twofold increase.

The 22 percent surge in imports, to $55.5 billion, was distributed between the developed and developing countries roughly in proportion to their share of the total.

Among the developed countries, the worsening in the U.S. trade position with Western Europe was most severe in 1972, shifting to a deficit from its traditional surplus. For the year as a whole, imports from the area exceeded exports by $140 million. Since midyear, however, export growth exceeded the rate of import expansion by a substantial margin, and in the final six months of 1972 a near balance was recorded in our trade with Western Europe. The large U.S. trade deficit with Japan increased further in 1972 to $4.1 billion. The imbalance with Canada showed no significant change but an improvement was noted in the second half of the year as exports expanded strongly while imports posted a small decline.

U.S. Exports By Major World Areas 1972



Trade with Canada buoyant

Exports to Canada expanded strongly in 1972, benefiting primarily from rapid economic growth in that country. Shipments rose by one fifth to $12.4 billion, with gains recorded in every quarter. A steep rise in machinery sales, sparked by strong acceleration in Canadian investment expenditures, accounted for nearly one third of the advance. Shipments of farm machinery and office machines recorded the largest gains. Exports of construction machinery and telecommunications equipment also advanced significantly. Automotive products, especially parts for assembly, expanded by one fifth, reflecting continued increases in motor vehicle production in Canada.

Imports from Canada continued on an uptrend, rising 17 percent in 1972 to total $14.9 billion. In contrast to the 1971 pattern, purchases of industrial supplies rather than automotive products recorded the largest increase. Continued buoyancy in U.S. construction activity sparked a sharp expansion in lumber imports. The inflow of crude petroleum and natural gas also surged upward in response to growing energy requirements in this country. Nonferrous metals, largely zinc, nickel, and aluminum, rose to higher levels. Stepped-up imports of automotive products reflected the continued strength of the U.S. auto market and the further expansion of Canada's share of North American car production. Arrivals of farm machinery and computer-related equipment recorded significant increases, as did aircraft parts.

Recovering from their 1971 decline, exports to Western Europe rose 8 percent to $15.3 billion last year. Economic activity in the area, while remaining generally below potential, has picked up momentum and exports showed considerable strength in the second half of 1972. The rise in nonagricultural deliveries to Western Europe last year was led by machinery. Shipments of electronic components, aircraft engines, electric power apparatus, and materials handling equipment all posted large increases as did chemical exports. Sales of farm products rose by 16 percent. Much of this advance reflected a surge in corn deliveries, particularly to Italy and Spain. Shipments of soybeans and tobacco registered large increases as well. On the negative side, deliveries of civilian aircraft and military goods fell sharply.

Area Distribution Of U.S. Commodity Exports, 1972

Billions of dollars

Area	Total exports and re-exports	Machinery, transport equipment	Chemicals	Other non-agricultural commodities	Agricultural commodities
	49.7	21.4	4.1	13.9	9.4
Western Europe	15.3	5.6	1.4	4.5	3.5
Canada	12.4	7.1	0.7	3.4	0.8
American Republics	6.5	3.0	0.9	1.8	0.7
Japan	4.9	1.2	0.3	1.9	1.4
East and South Asia	4.4	1.5	0.3	1.1	1.5
Near East	2.0	0.9	0.1	0.7	0.3
Africa	1.5	0.8	0.1	0.3	0.3
Oceania	1.0	0.5	0.1	0.3	0.1
Communist countries in Europe, Asia	0.9	0.1	[1]	0.1	0.7
Other Western Hemisphere	0.8	0.2	0.1	0.3	0.1

Note: All data include military grant-aid, the total of which was $0.6 billion. Commodity data exclude re-exports.

[1] *Less than $50 million.*

With heavy U.S. demand for many products boosting purchases substantially from almost every country in the area, imports from Western Europe climbed 22 percent to $15.4 billion. Consumer goods accounted for two fifths of the advance. Although arrivals of passenger cars declined in number, the value of these deliveries grew by 9 percent due to higher prices and larger receipts of more expensive models. Imports of bicycles, mainly from France, West Germany, and Italy, rose steeply as did footwear, diamonds, and home appliances. Among industrial supplies, large increases were recorded in imports of chemicals, nonferrous metals, and tires. A heavy inflow of machinery and aircraft engines boosted imports of capital goods.

Trade rises with Japan

Reversing the sharp decline recorded in 1971, exports to Japan rose 22 percent to $4.9 billion. Japanese economic activity began to pick up in 1972, stimulating U.S. sales to that country. Mainly in response to rising residential construction activity, shipments of logs and lumber recorded a substantial increase. Aircraft sales were boosted by the delivery of several jumbo jets. Moreover, agricultural sales posted a big advance. A large increase in tobacco deliveries mainly reflected the rebuilding of stocks depleted during the U.S. dock strikes in 1971. Shipments of soybeans, corn, and grapefruit also contributed importantly to the gain.

Purchases from Japan rose 25 percent—slightly faster than the rate recorded in 1971—to $9.1 billion for the year. Consumer goods again contributed most of the increase. The value of automobile imports moved up sharply but the quantity rose less vigorously. Purchases of nonautomotive consumer goods, led by motorcycles, sound recorders, and photographic goods, also climbed.

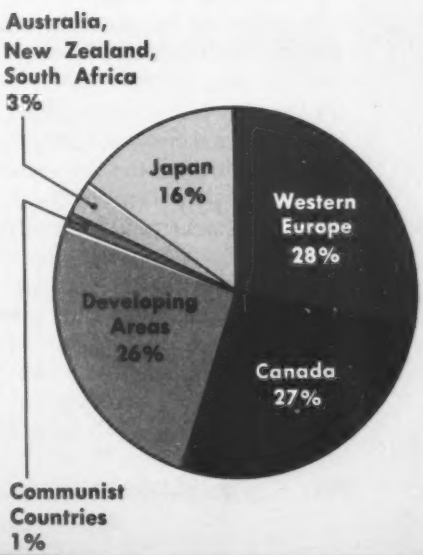
Gains in Hemisphere

Largely reflecting considerably higher sales to Mexico and Brazil, where economic activity was especially buoyant, exports to the American Republics rose to $6.5 billion, 14 percent above their 1971 value. Machinery deliveries gained strongly, led by farm tractors and construction machinery. Manufactured fertilizers for Brazil contributed a significant part of the overall export gain. Aircraft sales also climbed higher but shipments of trucks fell to lower levels. Wheat, corn, and sorghum spearheaded a sizable expansion in agricultural deliveries to the region.

After only a marginal increase in the preceding year, imports from the American Republics rose 18 percent to $5.8 billion in 1972. Entries of food and beverages rose vigorously from the region, led by sugar from the Dominican Republic and coffee from Brazil. The value of fish imports also moved up sharply, in part reflecting higher prices. Stepped-up steel purchases contributed to the increase in industrial supplies. Arrivals of crude petroleum and fuel oil, largely from Venezuela, showed only moderate growth. Entries of television apparatus and electronic components from U.S.-owned subsidiary plants in Mexico moved up sharply.

Exports to East and South Asia increased 8 percent to $4.4 billion. Shipments of nonagricultural products to the area were led by machinery, particularly parts for office machines, telecommunications equipment, and semiconductor devices for assembly at plants located in Singapore, Taiwan, and Hong Kong. Agricultural sales to the area recorded a strong advance. Wheat exports to Pakistan, Bang-

U.S. Imports By Major World Areas 1972



Geographic Origin Of U.S. Commodity Imports, 1972

Billions of dollars

Area	Total imports	Consumer goods	Industrial supplies	Capital goods	Foods and beverages
	55.6	19.6	20.3	6.7	7.3
Western Europe	15.4	6.2	4.5	2.7	1.5
Canada	14.9	4.7	6.8	1.9	0.7
Japan	9.1	5.2	2.3	1.2	0.3
American Republics	5.8	0.4	2.3	0.3	2.6
East and South Asia	5.3	2.6	1.6	0.4	0.6
Africa	1.6	0.1	0.8	[1]	0.6
Other Western Hemisphere	1.2	[1]	1.0	[1]	0.1
Oceania	1.1	[1]	0.3	[1]	0.8
Near East	0.8	0.2	0.5	[1]	[1]
Communist countries in Europe, Asia	0.4	0.1	0.2	[1]	0.1

[1] *Less than $50 million.*

ladesh, and Korea rose sharply as did rice shipments to Korea and Indonesia.

Continuing on their steep uptrend of recent years, purchases from East and South Asia rose by one third, largely on the strength of buoyant arrivals from three countries—Taiwan, Hong Kong, and Korea. Entries of consumer goods increased strongly, led by clothing imports. Receipts of television and radio sets and footwear also climbed. Plywood, mainly from Korea, and crude petroleum from Indonesia contributed a large part of the expansion in industrial supplies. Significant increases were recorded in arrivals of transistors and semiconductors from Singapore and Hong Kong.

Deliveries to the Near East rose 9 percent to $2 billion. Last year's advance was much slower than in 1971 because of a sharp falloff in shipments to Israel. The export gain to the region as a whole centered in machinery sales, particularly oil-drilling equipment and electrical generators. Exports of steel as well as automotive and aircraft parts also contributed to the rise. Sales of civilian plans, however, declined. Rice deliveries nearly tripled during the year. The 30 percent increase in imports from the area consisted primarily of sharply higher petroleum purchases from Saudi Arabia and Iran.

After increasing nearly a tenth in 1971, exports to Africa declined 8 percent last year. Civilian aircraft sales dropped sharply from the exceptionally high levels of 1971; reduced shipments of steel, machinery, and chemicals also contributed to the decrease. Reflecting a steep rise in purchase of crude petroleum from Nigeria, Libya, and Algeria, arrivals from Africa grew 30 percent in 1972.

Sales to Communist areas up

Exports to the Communist countries of Eastern Europe more than doubled last year, to a total of $818 million. The advance centered in large loadings of wheat and corn for the USSR. Exports of soybeans and cattle hides also advanced. Shipments of nonagricultural products of the area showed only a marginal rise as greater machinery deliveries were offset by a drop in chemical sales. Imports from Eastern Europe were also expansive, rising 44 percent to $321 million. Greater purchases of platinum from the USSR and canned hams from Poland accounted for a large part of the increase. Entries of fuel oil from Romania and the Soviet Union also rose. Exports to China surged from none in 1971 to $60 million last year. Wheat and corn accounted for nearly all of the export total. From the $5 million level recorded in the previous year, imports from China rose to $32 million in 1972. This increase consisted largely of greater purchases of raw silk, wool, brush bristles, antiques, and spices.

Revised December Census Bureau figures place the total of U.S. exports for 1972 at $49,208 million, instead of $49,116 million, as reported in the Feb. 5 issue of* Commerce Today. *The revision results in a $6,347 million 1972 trade deficit, not $6,439 million as reported at that time.

The review of last year's U.S. foreign trade by major world areas, presented in the article above, is the second of a two-part series prepared by the Commerce Department's International Trade Analysis Staff. U.S. exports and imports by major commodities were analyzed in the Feb. 19 issue.

Mississippi Valley Traders To Meet

Missouri will be this year's honor state and its Governor Christopher S. Bond the featured speaker for the 28th Mississippi Valley World Trade Conference in New Orleans, March 22 and 23.

Among the topics are: U.S. Government Assistance to World Traders, and a World Market Roundup—with Latin America, Europe and Africa, the Far East, and Canada the areas to be covered. Floating workshops aboard the steamer Commodore will consider various aspects of shipping; international banking; careers in international business; and Commerce Department services.

Brooks McCormick, president of International Harvester Co., Chicago, will be among the speakers. Harvey C. Busch is president of the Mississippi Valley World Trade Council, one of several New Orleans agencies that sponsor the annual conference.

Trade Fairs, Centers

U.S. Exhibitors Sought For Three Japan Events

Consumer goods: Japan. Amid growing indications that the Japanese market of 105 million offers considerable sales potential for high-quality American products, the U.S. Trade Center in Tokyo will hold a U.S. Housewares Exhibition, Aug. 20-25. Rising expectations for a better and more varied life-style, supported by greater disposable income than ever before, are matched by the growing Japanese search for better housing, more leisure-type living, and use of labor-saving devices. Per capita income, usually an accurate measure of consumer purchasing power, is expected to rise to $3000 by 1975, which should support an increased demand for the "good life." Moreover, the Japanese Ministry of Construction has announced that 9½ million new housing units will have been completed by the end of the current construction plan in 1975.

Products at the exhibit will include but not be limited to: glassware, electric housewares, cook and bakeware, kitchen and rubber ware, outdoor products and accessories, serving and buffet products and accessories, decorative accessories, pantry ware, and cutlery, flatware, and holloware.

U.S. manufacturers of these or related products should telephone Maurice A. Shea (202-967-2461), or write him at BIC-232, U.S. Department of Commerce, Washington, D.C. 20230.

Pollution control equipment: Japan. The U.S. Department of Commerce will sponsor an exhibit in the 1973 Antipollution Exhibition at Osaka, Nov. 7-12. Approximately 50 American manufacturers of air, water, and solid waste pollution control equipment and instrumentation will be able to introduce new products and technology to the Japanese market.

Recently conducted market research reveals high sales potential for 30 individual items in Japan, including various types of analytical and measuring equipment, water treatment equipment, pipes, pumps and valves, air pollution control equipment, and equipment for control and recycling of solid wastes. Total imports over the next three years (1973-75) are estimated at nearly $9 million, a relatively small share of Japan's anticipated demand. This suggests that vigorous market promotion activities, such as will be provided by Commerce's trained specialists in support of U.S. exhibitors at the Osaka event could result in American equipment sales substantially exceeding current estimates.

There has been a substantial increase in the Japanese Government's budget allocation for antipollution and environment preservation for the 1973 fiscal year (ending March 31, 1974). The extensive $1.7 billion government program covers such diverse areas as water pollution, photochemical smog, sewage and waste disposal systems, preservation of green zones, and traffic-based pollution controls. Further encouragement to U.S. exporters may be found in the February 13 announcement in Washington of the 10 percent devaluation of the dollar. This, combined with the actual upward valuation of the Japanese yen (to somewhere near 260 to the dollar), should further improve the competitive position of U.S. products on the Japanese market.

Commerce staged a highly successful antipollution equipment show in Tokyo in December 1971. For further information call Robert Levine (202-967-4056), or write him at BIC-232, U.S. Department of Commerce, Washington, D.C. 20230.

Microwave circuits, components and instrumentation: Japan. The Japanese market for microwave products amounted to approximately $200 million in 1971—a 15 percent increase over comparable 1970 figures. This growth occurred while the overall Japanese economy was experiencing what, for it, was one of the worst recessions of the post-war period. The Electronics Industries Association of Japan estimates that demand for microwave products will continue to increase just as vigorously for the foreseeable future—at an annual rate of 16 percent. U.S. microwave products manufacturers have an excellent opportunity to establish or expand their marketing activities by participation in a Dec. 3-8 exhibition at the Tokyo Trade Center.

While microwave technology has promising potential applications in the medical, engineering, meteorological, and industrial processing fields, the most significant market potential lies in public and private data communications. In Japan both the domestic and international telecommunications firms are planning sizable expansion and modernization programs over the next several years. The domestic telecommunications firm, Nippon Telephone and Telegraph Public Corp. (NTT), now allows use of non-NTT equipment on its leased lines for data transmission and processing, stimulating demand for microwave products in the communications field.

Products incorporating the latest technology and those with applications in the over-10-GHz range offer the best sales prospects. The recent yen/dollar adjustments further enhance the appeal of U.S. products. For additional information, call Maurice A. Shea on 202-967-2461 or write him at BIC-232, U.S. Department of Commerce, Washington, D.C. 20230.

YOUNG DIPLOMAT—*Son of U.S. Ambassador to the Netherlands John W. Middendorf stands in front of his father as they shepherd a group of 86 Dutch businessmen flown in from the Netherlands through the U.S. exhibit at PAKEX 72.*

APPRECIATIVE AUDIENCE—*Exhibitors' representatives applaud one of the presentations at a special briefing for participants in the Commerce Department's PAKEX exhibit. All of the 30 exhibitors made off-the-floor sales.*

Off-Floor Sales Top $1 Million At London Exhibit

All 30 U.S. firms which displayed their packaging equipment at the Commerce Department's exhibition in London's PAKEX 72 shared in the more than $1 million in off-the-floor sales that were recorded.

About 34,000 visitors, or 90 percent of the total attendance for the entire exhibit, viewed the U.S. display, and exhibitors reported a total of 3,760 sales leads during the course of the five-day show.

The three new-to-market firms were seeking representation in the United Kingdom and nearby markets. Four representatives were signed during the exhibit and negotiations begun with 14 others.

Specially chartered flights brought groups of Dutch and Swedish businessmen to the show. U.S. Ambassador J. W. Middendorf personally escorted the 86 Dutch businessmen, who were also treated to fair catalogs, U.S. exhibit catalogs, admission and luncheon tickets.

The group of 80 Swedish executives attended a reception at the U.S. Exhibition scheduled for them after viewing hours.

Caracas Education Show Seeks U.S. Participants

The Third Venezuelan Education Exposition will be held April 30-May 6 in Caracas. The organizers are seeking U.S. producers of educational equipment or software.

Although local agents will handle the majority of exhibits, American companies not currently represented and those which have new-to-market equipment will be welcome.

The Education Ministry received a big boost in its 1973 budget.

Interested firms should cable Sr. Arnold Horowitz, Banco del Libro, Final Avenida Libertador, Sur Altamira, Apartado 10914, Caracas.

Marine Equipment Show To Open Singapore U.S. Trade Center in July

The Department of Commerce's newest Regional Trade Development Center (RTDC) will open July 9 in Singapore, with an exhibition featuring marine electronics, communications, navigation and instrumentation equipment. The Trade Center, located on Orchard Road in a growing area of commercial development, will provide an outlet for U.S. businessmen in marketing their products throughout Southeast Asia.

Thomas Mayfield has been named Director of the Singapore Trade Development Center. He comes to Singapore following a successful tour as Director of the U.S. Trade Center in London.

A full program of trade promotion events is planned for the Trade Center by the Far East Division of the Office of International Marketing. These events will include trade shows, both in Singapore and at other business centers throughout Southeast Asia; Joint Export Establishment Promotions (JEEP's); special between-show promotions; catalog shows; mini-shows; technical seminars and workshops.

Singapore is a natural for servicing the marine industry. A major crossroads for world shipping, the marine transport business forms an increasing and profitable part of Singapore's economy through maintenance, repair, and building of all types of vessels.

The shipbuilding and ship repair industry has received a tremendous boost from oil exploration activities, especially in the construction, outfitting, and servicing of highly sophisticated off-shore oil exploration/production drilling rigs.

Singapore imported $15.7 million worth of this equipment in 1971. Of this total, U.S. manufacturers supplied $2.4 million, or approximately 15 percent. Local production of these items is virtually nil.

The Singapore economy has been expanding in recent years at an enviable annual rate of from ten to fifteen percent in real terms. All sectors of the Singapore economy are growing. Rising prosperity, coupled with more capital-intensive investment, make Singapore a growing market for U.S. goods.

To reserve space for this exhibition, telephone Irvin Lloyd at (202-967-3783), or write him at BIC-238, U.S. Department of Commerce, Washington, D.C. 20230.

Paris Show Yields Top Sales For U.S. Swimming Pools

Like its vehicular namesake, Commerce's JEEP program demonstrated its amphibian qualities at an exhibit of U.S. swimming pools and equipment at the Paris Trade Center.

Fifteen of the 26 exhibitors at the event were new to the French market, and two others were making their first foray into exporting anywhere. A total of 14 representation agreements were signed, nine with firms outside of France. Negotiations with another 110 potential agents were opened.

Off-the-floor sales amounted to more than $148,000, and new-to-market firms expect to make another $1.6 million in sales during the year after the show and still another $4 million the next year.

Joint Export Establishment Promotions (JEEPs) are special efforts by the Commerce Department to attract new firms into exporting through setting up specific Trade Center shows for new-to-market exhibitors, and defraying up to $300 of the cost of overseas promotional activities and up to $100 of the cost of shipping unsold items back to the U.S. or to another JEEP. All this is in addition to the regular Trade Center services.

TRY IT OUT—*A Sylvan Pools official (at right) discusses installation of his firm's pools with the marketing director of Cegedur Pechiney, France's largest aluminum company. The recent JEEP show at the Paris Trade Center was a resounding success.*

Worldwide Business Outlook

Consumers Lead Britain To Faster Growth Rate

The British economy is now growing at a level close to the government's target of 5 percent. Most of this growth is still consumer led, with investment in manufacturing still weak and inventories being depleted.

Wage and price inflation continue to be a serious problem, and the Government found it necessary to impose a freeze on wages, prices, rents and dividends on Nov. 6. The balance of payments position deteriorated in the second half of 1972, with a trade deficit of about £700 million recorded for the year.

Forecasts of the economic outlook are particularly difficult because of: 1) strikes, which distorted the data for 1972; 2) the effects of the floating pound; and 3) the problematic success of Phase Two of the wage-price freeze.

Government priorities

The government's stated priorities are to reconcile a faster rate of economic growth with a reduced rate of inflation and to convince the public that its policies are fair.

Based on historic trends, economic growth was abnormally fast in the second half of 1972, but unduly dependent on private consumption and public expenditure. There was also extremely fast growth in the money supply which will have to be curbed in the current year. Much will also depend on labor's reaction to the government's plan to control wages and prices.

The price stabilization measures taken by the Government will encourage exports to the extent that the domestic market becomes less profitable than it would otherwise have been. The longer term prospects for investment are improving. No major upturn is foreseen in 1973, but an increase of about 13 percent is expected in 1974.

The National Institute of Economic and Social Research sees growth in GDP of 4.9 percent in 1973 but a slowdown in consumer expenditures to 3.4 percent compared to 6.0 percent in 1972.

The largest problem on the horizon is an expected current account deficit, ranging from £250-£1,000 million pounds. Most forecasts put the deficit in the range of £250-£500 million. This is particularly disturbing since the current account has gone from a surplus of £1 billion in 1971 to an almost balance in 1972, and then a considerable deficit in 1973.

Much of the deterioration will be due to the change in the terms of trade and the hope is that the devaluation of the pound which has taken place since June 1972 will improve the situation.

The dollar-sterling rate continued to move down during the second half of 1972, settling around $2.35. This represented about a 10 percent devaluation from the exchange rate established in December 1971 at the Smithsonian. In late February, after the Feb. 12 devaluation of the dollar, the dollar/floating sterling rate stood at around $2.43.

U.S. products will continue to benefit from improved competitiveness gained in relation to other exporters to the United Kingdom. Also, the rate of inflation has been considerably higher in the United Kingdom than in the United States, thus giving U.S. products some competitive price advantage.

With an expansionary budget in 1972 and high consumer spending, demand for imports increased and there were improved market opportunities, especially in the durable goods category.

With Britain's entry into the European Economic Community on Jan. 1, 1973, U.S. products will be increasingly at a disadvantage in the U.K. market. Products from the other EEC countries will eventually be able to enter the United Kingdom dutyfree, and there will be increased contact between the U.K. businessmen and their EEC counterparts.

In general, prospects for growth in the U.K. economy appear good, although private manufacturing investment prospects remain depressed with meaningful investment growth not expected until 1974. As consumer demand for durable goods continues, a renewal of stockbuilding can be anticipated with favorable effects on demand for imported raw materials and semi-finished goods.

U.S. exporters and investors will wish to pay particular attention to possible changes next month in U.K. corporate tax rates and proposed changes in the method of taxation of dividends, as well as to the introduction of the value-added tax.

Industries of interest

Specific industries of interest to U.S. producers include:

► Mechanical Engineering — While there was some improvement toward the end of 1972, the outlook for 1973 remains mixed. Motor vehicles were the exception, with production and sales up markedly throughout most of the year due to increased consumer demand. Capital investment in plant and equipment continued to be slow with no signs of major change in 1972.

The year was, moreover, a period of rationalizations and consolidations for large sections of the mechanical engineering industry with most factories operating at considerably less than full capacity. Labor problems, the uncertainty over Government tax policies, the implementation of VAT, inflation, squeezed credit and uncertainties caused by joining the EEC will combine to keep this sec-

tor cautious and slow to expand in 1973.

There are some areas, though, which should prove attractive to U.S. companies exporting, seeking to license products, or entering into joint ventures with British companies. These include oil and gas equipment, where two large fields—Brent (Shell-Esso) and Forties (BP) have the potential of one million barrels per day; there is the hope that Britain will become self-sufficient in oil by the mid-1980's with production of about three million barrels per day, thus creating an enormous market for imported oil tools and equipment.

Food processing machinery will be in greater demand following a series of mergers and acquisitions by U.K. firms on the Continent. Sales of motor vehicles, especially the sales of British-made trucks and other commercial vehicles and components, should increase with U.K. entry into the EEC. The relatively high degree of skill, relatively low labor costs (apart from strikes), and availability of labor in Britain should encourage new investment expansion for most sectors of this industry.

Machine tools showed only a slight up turn of sales at the end of 1972, due largely to the injection by the British Government of £16 million to government connected institutions for spending on machine tool purchases. In general, the outlook for 1973 is not encouraging.

The outlook for packaging and plastics processing machinery is fair to good for 1973 and good in the longer term. Use of paper, plastic, and stainless steel products, especially in the packaging field, continues to increase yearly at a steady pace.

Finally, other engineering sectors which appear to have fair to good prospects for 1973 include agricultural machinery, construction equipment, industrial engines, mechanical handling equipment, pumps-valves-compressors, and environment-connected machinery and equipment.

CLOSE BRITISH SCRUTINY—*Epoxy Technology's range of epoxies for the electronics industry undergoes examination by K. C. Bingham of International Computers Ltd. at a recent London Trade Center show. Frank Kulesza (right), president of the Massachusetts firm, reported a big potential market from the exhibition.*

► Electronics—The British electronics industry (telecommunications, consumer electronics, computers, etc.) continues to do well in total sales but the "success" seems attributable to U.S. and Japanese-owned firms operating in the United Kingdom, rather than British-owned firms. British strength continues to lie in radio communications and navigation aids.

The U.K. Government has made a number of responses to continuing requests for support of the British electronics (including computers) industry, including loans to the computer industry and the micro-circuit industry. Most local observers believe the government's aid is too small to significantly increase the international competitiveness of the British firms involved.

► Aerospace — The British aerospace industry had a second record-breaking year of exports in 1972 but most of this continues to come from spare parts and reconditioned equipment, and there remains great concern about the lack of projects for the late 1970's and 1980's. There is general agreement in the United Kingdom that aerospace capacity needs to be reduced and that the industry needs stronger collaborative ties with Europe or the United States.

► Steel—In December, the Government announced plans to spend $7 billion to modernize the nationalized steel industry over the next ten years. A more detailed plan will be published in January and this should provide a clearer guide to the type of equipment the British Steel Corporation will be purchasing. While preference will probably be given to British equipment, British Steel Corporation executives acknowledge that a substantial portion will be imported.

► Chemicals — Third quarter 1972 figures indicate a slight upturn in the demand for chemicals, but it still appears that the industry will be plagued by over-capacity. The Chemicals Industries Association forecasts that investment in chemical plants will drop in 1973 by £90 million from the 1972 level of £340 million. American-owned contractors still dominate the construction of oil refining and chemical manufacturing plants. There continues to be interest from U.K. producers in obtaining licenses from America for new or advanced chemicals or processes.

► The Channel Tunnel Project —Bids will be set this year for preparatory studies on the tunnel between France and England. While preference will be given to French and British products, the size and complexity of the project should allow for substantial American exports.

Improved Foreign Reserve Position May Boost Ethiopia's Buying Power

Ethiopia's economic prospects appear favorable over the next nine months.

Developments in the subsequent period will depend on then existing conditions in the coffee market and implementation of the government's development policies, which cannot now be predicted. Longer term prospects will hinge on Ethiopia's capacity to develop its agricultural potential, particularly export markets.

Encouraging factors

The U.S. Embassy in Addis Ababa points out an additional encouraging but still largely unknown factor with possibilities for major impetus on Ethiopia's long-run economic growth: the minerals sector. Copper developments and increased interest in potash due to firming world prices already constitute concrete progress and exploration for other mineral deposits, including petroleum, continues.

Finally, Ethiopia appears to be on the verge of a major expansion of its tourist infrastructure. Such expansion is clearly a prerequisite to any further increase in the number of tourists visiting Ethiopia.

The past year witnessed a sharp increase in Ethiopia's foreign exchange reserves. From a low of US$57.5 million in February 1972, Ethiopia's reserves rose by year's end to $86 million, equivalent to about five months' imports at 1971 levels. This improvement in Ethiopia's external position is largely attributable to excellent prices for hides and skins exports and a reported decline in imports during 1972 compared with 1971. For example, domestic sales of passenger vehicles dropped from an estimated 2,046 units in 1971 to an estimated 1,763 units in 1972. Dealers also mentioned that the less expensive models sold relatively better in 1972.

The strength in Ethiopia's external accounts is particularly noteworthy in view of uncertainty surrounding the coffee situation during the last half of 1972. The prospective increase in coffee prices attributable to adverse weather conditions in Brazil at the end of the summer was balanced by the prolonged uncertainty in the negotiations over quota renewals under the International Coffee Agreement throughout the fall.

As a result, coffee buyers delayed normal purchases well beyond the beginning of the new coffee season on Oct. 1. Nevertheless, prices remained firm in view of the general market consensus that world coffee supply and demand were largely in equilibrium. The decision to abandon renewal of quotas for the remainder of the current coffee year apparently ended the uncertainty, and coffee sales resumed normal levels by the end of the year.

Continued upswing

Present prospects for the maintenance of favorable coffee prices throughout the current export season suggest that Ethiopia's reserves will continue their normal seasonal upswing through the spring of 1973.

The peak reserve position will be a function of import demand, which is beginning to increase in response to the more favorable economic outlook. So long as existing government budgetary policy remains unchanged, there would appear to be little or no external restraint on Ethiopia's development over the next nine months.

The overall retail price index for Addis Ababa (1963 = 100) declined gradually from 138.9 in November 1971 to 135.1 in November 1972, primarily as a result of a substantial decline in the index for food. The effect is the maintenance of stable purchasing power for the vast mass of the population—a major government objective—coupled with a significant increase in the cost of living for persons with a significant demand for imports, which were subjected to an increase from 12 percent to 15 percent in the transaction tax in July, as well as significant specific tariff increases in 1972 for paper, textiles, tools and most luxury items. These price developments have, therefore, exerted a dampening effect on import demand which can be expected to persist.

Well on the way

Of all areas of Ethiopia's manufacturing sector (which still constitutes less than 10 percent of GNP), the textile industry has come closest to achieving the goals set for it by Ethiopia's current Five-Year Plan. This is particularly true of import substitution and, given its pace, Ethiopia is now well on the way to becoming largely self-sufficient in these goods.

Ethiopia recently inaugurated its first tire factory, which now has the capacity to satisfy about 45 percent of local demand. The plant has started to produce a variety of passenger car, light truck and heavy duty truck tires and eventually hopes to satisfy most domestic requirements.

On Nov. 2, the Emperor announced that petroleum exploration activities being carried out by Tenneco Oil had shown indications of the existence of oil and natural gas in Southwestern Ethiopia and that exploration was continuing. In the fall of 1972, Texaco and Chevron also opened offices in Ethiopia.

A Japanese firm, Nippon Mining, is currently engaged in preparing to exploit sizable, high

quality copper deposits in the Debarwa-Asmara area.

Tourism, already an important industry, can be expected to grow even further over the next few years. The number of tourists has been increasing by about 20 percent per year. In 1971 (latest available information), an estimated 65,000 visitors came to Ethiopia. To cope with the demand, four new 50-bed first class category hotels are scheduled to be built along the Historic Route (Gondar, Axum, Lalibela and Bahr Dar) and, somewhat later, a new 250-room luxury hotel in Addis Ababa.

Over the past few years, Ethiopian exports of meat and meat products have shown a substantial increase. Between 1969 and 1971, exports more than doubled, rising from $1.74 million to $3.56 million. Although statistics for 1972 are not yet available, a further increase can be expected in view of very favorable world meat prices.

Increased attention

Ethiopia should benefit from the increased attention now being directed by international development institutions to the socalled 25 "least developed countries" which include Ethiopia. Ethiopia already enjoys a substantial level of foreign aid. Aid disbursements in 1971 totaled almost $44 million of which about $16 million was untied multilateral assistance (largely from the World Bank). U.S. bilateral assistance in 1971 also equaled about $16 million, concentrated in agriculture, airport construction, and malaria control.

World Bank group assistance has focused on highways, hydroelectric power, and education. Future IBRD/IDA targets include roads, agriculture, water supply and education. World Bank funds for agricultural and industrial projects including fertilizer imports are also being extended to the Ethiopian Agricultural and Industrial Development Bank for competitive procurement.

ETHIOPIAN STUDENTS STUDY TELECOMMUNICATIONS—*The Ethiopian Government is expanding its telecommunications network and would like U.S. bids.*

Ethiopia can probably obtain external assistance for any reasonable development project. The major restraint is now Ethiopia's capital absortive capacity, which in turn is a function of the government's administrative effectiveness and its capacity to generate domestic revenue.

Ethiopia imported 30,000 metric tons of fertilizer in 1972, up from 22,000 metric tons in 1971. Imports in 1973 are projected to rise to 40,000 metric tons.

Seeks foreign investors

The Imperial Ethiopian Government seeks foreign investors to participate in a joint share company to build the previously mentioned tourist hotel chain. The results of the IBRD tourism sector study currently in preparation may lead to Ethiopian investment in airfield improvements. These airfield improvements can be expected eventually to generate additional aircraft procurement. There is little doubt that tourism in Ethiopia is on the verge of a major expansion—the only remaining unknown is the rate of growth.

The Ethiopian Government is actively seeking foreign investment in the exploration and development of Ethiopia's mineral resources. Although Ethiopia remains largely unexplored in this respect, the Ethiopian Ministry of Mines believes favorable prospects exist for platinum, copper, and lead.

Significant expansion

The Ethiopian Government is presently engaged in a significant expansion of its microwave telecommunications network. The Ethiopian Ministry of Telecommunications has indicated strong interest in receiving U.S. bids for these projects.

Ethiopia now constitutes a market for 200-300 truck imports annually. Although the Italians presently dominate this market considerable interest has been demonstrated on the part of Ethiopians in the procurement of U.S. trucks, which are deemed to be particularly suited to Ethiopian road conditions. U.S. penetration of the Ethiopian truck market will require a willingness to undertake prior investment in spare parts and service facilities.

Lebanon Set For Another Good Year Fueled By Strong Capital Inflows

Lebanon's economy enters 1973 with all sectors performing satisfactorily and some booming.

The strong capital inflow which began in late 1970 continued throughout 1972 and is expected to continue in 1973. An investment boom led by construction has resulted but banks have complained of excess liquidity and inflation is of increasing concern.

Capable of more growth

Although some sectors may be near capacity, the economy still has substantial idle or under-utilized resources of capital and labor and seems capable of another year of 10 percent or higher growth in 1973, reports the U.S. Embassy in Beirut.

The free banking system and tight bank secrecy law should continue to attract capital from the region's booming oil industry, overseas Lebanese and refugees from Switzerland's modified secrecy law. Containing inflation and channeling the inflow into long-term development appear to be the primary challenges in 1973.

After two years of plenty, the banks may find it easier to lengthen credit and may gain assistance from two pending government measures. A National Bank for Industrial and Touristic Development is scheduled to open in March with initial capital of $20 million, 51 percent from the government and 49 percent from the banks, but with equal voting power for the two. Draft amendments to the Monetary and Credit Law which may be adopted this year would, in addition to broadening banking operations and monetary policy, add the facilitation of economic development to the central bank's mission.

These developments may enable faster progress for the 1972-77 Development Plan, which is less a program than a list of possibilities. Of a possible $2.4 billion in expenditures, about 75 percent is left to the private sector, while the public sector role is put at $571 million, an annual average of $96 million, considerably above current levels.

Agreement with the EEC

The small but rapidly expanding industrial sector should profit from the 1973-77 preferential trade agreement signed Dec. 18 with the European Economic Community. This schedules EEC tariff reductions in 1973 of 45 percent on nearly 60 percent of Lebanese industrial exports to the EEC, followed by further reductions of 55 percent, according to initial reports. This may hasten development of an export-oriented industrial free zone now under study.

Lebanon's per capita GNP is estimated at about $600, more than twice that of nearby Syria and Jordan and fifth in the Middle East, making the country an attractive market among the smaller countries of the area. Tourism enlarges the market still further.

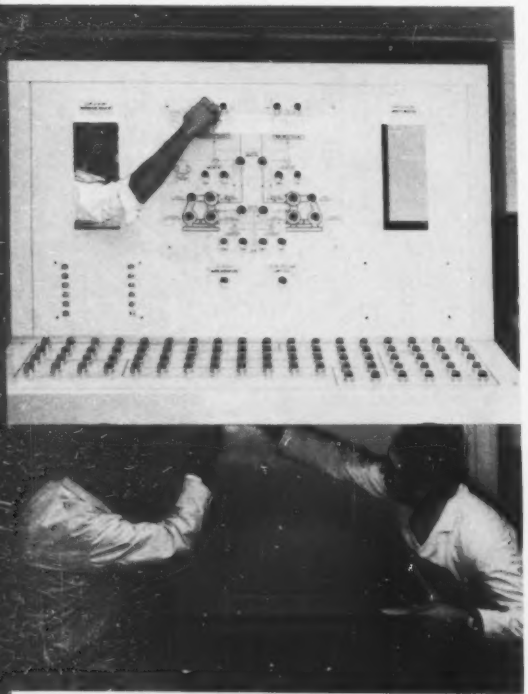
The United States usually is Lebanon's leading supplier (after gold imports are excluded from trade figures) and in 1971 retained first place with exports of $7 million, for 11.5 percent of the market. Exports in 1972 through the third quarter were running at an annual rate of about $100 million.

In addition to a wide range of consumer goods, enlarged export opportunities may exist this year in building equipment and furnishing as a result of the construction boom and in industrial machinery and materials for expanding light industries. Civil aviation appears to be another attractive market area. Should projects envisioned in the Development Plan begin to materialize, consulting and engineering services may be in demand.

Oil will transform the area

American firms continue to use Beirut as a regional headquarters for the Middle East, which will be transformed in this decade by an unprecedented inflow of oil revenues. As a result of steep increases in oil prices and demand since 1971, per barrel income of Gulf oil governments rose by one-third and will total at least $30 billion from 1973 through 1975, when existing price agreements expire. On Jan. 1, several area governments became participating partners in existing oil concession companies with plans to go into the oil business on their own, opening a wide range of opportunities for consultants, equipment suppliers and financial advisors.

Beirut's rapid growth to a population of over one million has over-taxed public utilities but its location, schools, recreational facilities and air service continue to draw new American firms. Among new regional offices are those of Bechtel Engineering, FMC, Ramada Inns and Texas Instruments.



LEBANESE TECHNICIANS — *Honeywell's Lebanon branch offers complete control panel construction capability.*

Expanded operations are envisioned by Morgan Guaranty Trust, which is negotiating for a 40 percent interest in one of Beirut's 73 banks, and Boeing. A Hilton Hotel is planned for 1974.

Aside from hotel franchises, direct U.S. investment in Lebanon is concentrated in the two oil transit pipelines, each with a refinery for the local market. Crude oil exports from the Iraq Petroleum Co. (IPC) terminal at Tripoli have been suspended since IPC, in which Esso and Mobil together have a 23.75 percent interest, was nationalized by Iraq and Syria June 1. The wholly American-owned Medreco refinery attached to Tapline in the south has been engaged in negotiations over prices, which are government-controlled, for more than a year.

The growth of the industrial sector has prompted some interest in manufacturing, which may be increased by the new EEC agreement.

However, uncertainty of access to area markets because of border problems and the lack of a U.S.-Lebanon investment guarantee agreement may be retarding direct U.S. investment in this sector.

License Agreements With Japanese Can Aid Exports Of Components

A growing Japanese market for machined and other component parts is indicated by recent news articles and interviews, the U.S. Embassy in Tokyo reports, and one way of focusing on the U.S. export potential for such goods may be in licensing agreements between U.S. and Japanese firms.

The trend of licensing in Japan is away from heavy equipment and industrial machinery toward light industry and consumer goods. Thus, opportunities for increasing U.S. exports of component parts under these agreements may be even better than in the past. In addition, recent tariff reductions may enhance all such exports in both heavy and light goods.

U.S. goods competitive

According to Japanese news sources, the Embassy points out, manufacturers plan to buy more of their spare parts in the United States in lieu of local procurement. U.S. businessmen in different industries in Tokyo have commented that a substantial change is taking place in the competitiveness of American machined parts of many kinds. In some cases, this has been true all along, but the recent 20 percent reduction in tariffs is apparently permitting many U.S. goods of this kind to become competitive for the first time.

This new trend stems from the fact that Americans manufacture parts and components in highly automated plants that are not only efficient but are able to maintain a high quality standard. Japanese suppliers, on the other hand, are often small and inefficient and the quality leaves much to be desired. These companies are often subcontractors to the large Japanese corporations. They are often financially unstable, produce only for one buyer, and use low-cost machinery and labor. Comparatively, their costs can run higher than those of the American manufacturer, even with the additional freight and tariff charges.

There are now about 5,000 to 6,000 U.S. licensing arrangements between U.S. and Japanese companies. While many terminate in a year or two, it is estimated that about 1,000 new ones are made each year.

The 1972 Science and Technology White Paper, produced by the Science and Technology Agency of the Prime Minister's office, evaluated licensing agreements held by Japanese companies through 1970. The report pointed out that imports of technology have been increasing at the rate of 15 percent per year over the last six years, and that this trend will continue. The types of licensing, however, have been undergoing a change parallel to the changing priorities in the economy itself. In recent years, an increasing number of imports of specific technologies cater to distribution, consumption, pollution control and development of utilities. There is also a trend toward severer terms of contracts, particularly on royalty payments and restrictions on export markets.

In production technologies, imports related to consumer goods or distribution systems have been increasing. Other important gains were in clothing and fashion designing, technologies connected with leisure and modern living, and a spectacular 88 percent increase in licenses dealing with household electric appliances.

The Agency's annual report of November 1972, which dealt with licensing through 1971, showed the trend toward light industry continuing. While the majority of foreign technology introduced in 1971 (56.5 percent) still relates to machinery, chemical products, and electricity, the percentage has been gradually decreasing.

Problems, too

Even when U.S. components are competitive, however, some problems may be encountered. One is the longstanding habit of buying Japanese as a matter of principle. A second and more important one is that the sub-contractor arrangements in Japan are not based solely on cost or efficiency or even quality. Sub-contracting companies are usually completely dependent on their buyer for financing, as well as for buying the product. The buyer-seller, creditor-debtor relationship is a personal one that has developed over years and sometimes over generations. Therefore, the major end-user finds it extremely difficult,

even when the U.S. product is cheaper and better, to drop its traditional sub-contract and source from abroad.

Tool long in use

Japanese companies themselves have long used licensing arrangements with foreign companies abroad as a means to increase their exports. Licensing arrangements are made with a firm abroad for the assembly of a Japanese product, especially consumer appliances, with parts for the assembly being imported from Japan. Sometimes these foreign firms are organized by the Japanese exporter specifically for this purpose, and it is not uncommon for such an agreement to forego any royalty payments.

In several countries, Japanese firms have concluded a large number of such arrangements. Even where some investment is required, the Japanese companies have kept it to a minimum, insuring a return on such input in a matter of a few months. The net effect is usually greatly increased imports of parts from Japan over what likely would have been the case had the entire units been imported.

Likewise, U.S. firms, in making licensing arrangements, should explore thoroughly the relative advantage in including provisions for the amount of U.S. content to be used in the products made under the agreement. They should be aware that whereas in the past, supplying of parts from the United States compared to local manufacture was often clearly uneconomical, this may no longer be the situation.

Regulations regarding licensing are a part of Japan's Foreign Investment Law, and Government agencies review agreements between Japanese firms and foreign licensors. Of particular concern to the reviewing agencies are clauses that may restrict the activities of Japanese licensees.

TALKING BUSINESS IN JAPAN—*Peter W. Dixon, Chrysler Corp., discusses business with prospects at the U.S. Trade Center in Tokyo during the course of the Industrial Assembly Equipment and Supplies Exhibition, November 1972.*

Lesotho Offers Incentive Package To U.S. Investors

The Southern Africa nation of Lesotho has developed an attractive investment incentive package which provides for liberal tax breaks for approved manufacturers and related industries, and hotels and building companies. This report from the U.S. Embassy in Maseru discusses these incentives and other advantages Lesotho can offer to investors.

Manufacturers can choose

New manufacturers can choose between a six-year income tax holiday and special deductions on income tax. A 100 percent plant and machinery allowance, and utility and transportation allowances are among special tax benefits which can be obtained, and building developers may receive special housing allowances.

Investors are also exempt from transfer duties and can apply for product protection to the exclusion of other manufacturers who have not been granted a license. Exclusive protection is granted initially for a maximum of five years, but may be renewed.

The Lesotho National Development Corporation is a state-owned corporation established to attract and assist outside investors. It has broad powers to handle negotiations with government, company registration and tax incentive applications.

In the five years of its existence the LNDC has attracted expertise and investments from the United States, Great Britain, West Germany, Taiwan, Switzerland, Israel, Italy and Denmark. The industrial park in Maseru is bustling, and roads have been improved and other services provided to make the country's second industrial area at Ficksburg Bridge, 50 miles from Maseru, more attractive to investors.

HOLIDAY INN IN MASERU—*This hotel has been largely responsible for the big rise in tourist traffic to Lesotho. Two other large hotels are scheduled to be built.*

Several mining companies, including a large American firm, have invested large sums in diamond prospecting activities, and an American oil company recently signed a ten-year agreement to prospect for oil in the southern part of Lesotho.

A housing corporation has been established as a subsidiary of LNDC; one modern block of flats has been completed, while several low-cost housing schemes are planned.

The recently expanded 242-room Holiday Inn in Maseru made a taxed profit of $550,000 in 1971 and close to a million dollars in 1972. The hotel and its casino have been largely responsible for the rise in Lesotho's tourist traffic from less than 5,000 five years ago to about 70,000 in 1972.

Lesótho, which has spectacular mountain scenery, is expected to attract 200,000 tourists annually within five years. Two new hotels are planned, and consideration is being given to establishment of one or more multi-million dollar ski resorts in Lesotho's Maluti Mountains.

Other enterprises which LNDC has helped establish in Lesotho include tire, diamond cutting and polishing, electric lamp, rug, pottery and candle factories. The corporation is also building a $425,000 shopping center.

Considerable assistance

Since independence in 1966 Lesotho has attracted considerable development capital and resources. The United Nations Development Program is providing more than 60 technical assistance personnel for various ministries. A UNDP-supplied development banker is managing the country's National Development Bank, which will act to mobilize savings and investment capital.

The World Bank and the U.S. Agency for International Development are expected to begin work soon on an agricultural improvement project which will include development of credit institutions and road building, and Denmark is considering assistance in construction of an abattoir for livestock slaughtering.

Lesotho offers investors a number of natural advantages. Its literacy rate of approximately 70 percent is the highest in Africa. Some 140,000 Lesotho are currently employed in mining and other industries in the Republic of South Africa; many are highly trained and, with creation of new employment opportunities in Lesotho, will provide a pool of disciplined industrial workers.

At present Lesotho has relatively little industry and imports most of the goods it needs. Thus, there is considerable room for import substitution industries which can expand to export goods to the large Southern Africa market and beyond. Proximity to South Africa provides Lesotho with a modern transportation system and access to ports as well as with power and other infrastructural facilities.

Lesotho is considering association with the European Common Market while remaining in the Southern Africa Customs Union—a step which would give it trading advantages in Europe as well as in Southern Africa.

For more information write Lesotho's Embassy at 1601 Conn. Ave., NW., Washington, D.C., or Managing Director, Lesotho National Development Corporation, P.O. Box 666, Maseru, Lesotho. Copies of the current Five-Year Development Plan can be obtained from Lesotho's missions in Washington and New York or directly from the Central Planning Office in Maseru.

Currency Shifts Can Assist New Export Thrusts

The U.S. currency initiative last month brought about an exchange rate realignment that has the potential for favorably influencing U.S. exports, imports and overall payments.

On Feb. 12, the dollar was cut 10 percent in value against Special Drawing Rights, a substitute for gold as a currency value benchmark. Other currencies were also reduced in value against SDRs, some by the same 10 percent, some by less. Still others were left unchanged against the SDR, or were freed from their SDR pivot.

The new pattern of rates relating the dollar and respective other currencies to SDRs produced a revised set of official rates between the dollar and the other currencies, and there emerged new levels of rates for floating currencies. The accompanying table shows rates on Feb. 26 for nations that had by then

DE FACTO DOLLAR EXCHANGE RATES

Country	Current value of $1	Value change since Feb. 12 (%)
Algeria	4.09 A. dinar	−10
Argentina**	5.00 pesos	0
Australia	0.71 A. dollars	−10
Austria	20.97 schillings	−10
Bahamas	1.00 B. dollar	+ 3.2
Bahrain	0.3953 B. dinars	−10
Bangladesh	(Rate tied to floating pound sterling)	
Belgium	40.33 B. francs	−10
Bermuda	1.00 B. dollar	0
Bolivia	20.00 pesos	0
Botswana	0.705 S. Afr. rand	−10
Brazil**	6.029 cruzeiros	− 3
Burma	4.81 kyats	−10
Canada*	0.9912 C. dollars	− 0.87
China (Taiwan)	38.00 NT dollars	− 5
Denmark	6.28 kroner	−10
Dominican Rep.	1.00 peso	0
El Salvador	2.50 colones	0
Ethiopia	2.07 E. dollars	−10
Finland	3.90 markkaa	− 4.9
France	4.60 francs	−10
Gambia	(Rate tied to floating pound sterling)	
Germany	2.90 Deutsche marks	−10
Ghana	1.15 cedi	−10
Greece	30.00 drachmas	0
Guatemala	1.00 quetzale	0
Guinea	20.48 sily	−10
Haiti	5.00 gourdes	0
Honduras	2.00 lempiras	0
Hong Kong	5.09 HK dollars	−10
Iceland	98.56 kroner	0
Indonesia	4.50 rupiah	0
Iran	68.17 rials	−10
Iraq	0.296 dinars	−10
Israel	4.20 I. pounds	0
Italy*	566.00 lira	− 2.8
Jamaica	0.99 J. dollars	0
Japan*	264.00 yen	−14.3
Kenya	7.14 shillings	0
Khmer Rep.	231.00 riels	0
Korea	399.00 won	0
Kuwait	0.296 K. dinar	−10
Laos	240.00 kip	0
Lesotho	0.705 S. Afr. rand	−10
Liberia	(U.S. dollar is internal currency)	
Libyan Arab Rep.	0.296 L. dinar	−10
Luxembourg	40.33 B. francs	−10
Malagasy Rep.	230.21 M. francs	−10
Malaysia	2.54 M. dollars	− 10
Mexico	12.50 pesos	0
Morocco	4.19 dirhams	−10
Nepal	10.56 N. rupees	+ 4.5
Netherlands	2.92 guilders	−10
Neth. Antilles	1.79 N.A. guilders	0
New Zealand	0.74 N.Z. dollars	−10
Nicaragua	7.00 cordobas	0
Norway	5.98 kroner	−10
Pakistan	9.90 ruppees	−10
Philippines	6.78 pesos	0
Portugal	25.50 escudos	− 6.4
Qatar	3.95 dubai riyals	−10
Saudi Arabia	3.73 riyals	−10
Sierra Leone	(Rate tied to floating pound sterling)	
Singapore	2.54 S. dollars	−10
South Africa	0.705 rand	−10
Spain	58.03 pesetas	−10
Sri Lanka (Ceylon)	(Rate tied to floating pound sterling)	
Sudan**	0.348 S. pounds	0
Surinam	1.79 S. guilders	0
Sweden	4.56 kronas	− 5.2
Switzerland*	3.20 S. francs	−16.7
Tanzania	7.14 schillings	0
Thailand	20.8 baht	0
Tunisia	0.435 dinar	−10
Turkey	14.00 T. liras	0
Uganda	7.14 U. shillings	0
United Kingdom*	0.404 pounds	− 3.6
Uruguay	819.00 pesos	+ 3.3
USSR	0.746 ruble	− 9.5
Venezuela**	4.31 bolivares	− 1.9
Viet-Nam**	455.0 piastres	0
Yemen, People's Rep.	0.345 Y. dinar	−10
Yugoslavia	17.00 dinar	0
Zaire	0.50 zaires	0
Zambia	0.643 kwacha	−10

These rates to the dollar are fixed points of reference around which countries maintain their market rates, except for * countries that allow their rate to the dollar to float.
** Rate applies to limited types of transactions, including—in some cases exclusively—transactions that involve imports, or only essential imports.

made rate policy announcements. Also shown are the consequent dollar rate percentage changes.

Where the dollar declined vis-a-vis a currency, it can now be bought with less of the currency's units. In turn more dollars are needed to buy the units. This enhances and diminishes, respectively, the U.S. export and import potential, depending on the export and import markets and suppliers in terms of whose currencies the dollar fell, also on the amount it fell. An accompanying table lists the major markets and suppliers, and the recent dollar shifts in the latters' currencies. Almost all are in the group that gained against the dollar.

For a given U.S. export, its dollar price will translate to a lower price in any such foreign currency. If the item will thereby attract enough additional demand to yield more total receipts, U.S. sellers will tend to hold their dollar price, permitting the foreign currency price to drop. If demand stays unchanged, U.S. exporters will likely raise dollar price, and the foreign currency price will hold, also augmenting dollar receipts. In either event, the cheaper dollar and reciprocally appreciated currencies will make it possible for exports favorably to affect dollar inflow.

Concerning imports from a nation whose money now fetches increased dollars, their price in that money now translates to a dollar price equivalently increased. Unable except perhaps for a while to squeeze price and profit margins, overseas suppliers to the U.S. will maintain foreign prices, requiring dollar prices to rise, a process already underway.

For some imports this will cut demand sufficiently to help curb dollar outflow. For others, the cut in demand will only be enough to neutralize the dollar rise, and the resultant effect on outflow will be small. For still other goods—mainly raw materials and high technology items—there will be sustained import demand, which, with the higher dollar price, will contribute to enlarged dollar outflow. Overall, however, devaluation should reduce dollar loss on the U.S. import account.

From the above, it is clear devaluation will variously affect U.S. trade and payments. The net effect will be to help bring about a material dollar gain. This result will however take time, as demonstrated by the December, 1971, devaluation. And it is a result, as seen in that episode, that may be obscured by independent events. Notable among them could be major countries' disparate business cycle phases, which either can outdo the advantages the devaluation will yield the United States or, as in the earlier episode — when the United States almost alone experienced burgeoning business—can counter them.

U.S. Trade With Principal Partners

Changes since Feb. 12 in cost of buying U.S. and partners' currencies

Principal U.S. trading partners	U.S. exports to partners 1972 *$ millions*	Partners' cost of buying dollars *Percent change*	U.S. imports from partners 1972 *$ million*	U.S. cost of buying partners' currency *Percent*
Canada	12,415	− 0.87	14,909	+ 0.87
Japan	4,965	−14.3	9,064	+16.7
Germany	2,811	−10.0	4,249	+11.1
United Kingdom	2,658	− 3.6	2,986	+ 3.7
Mexico	1,982	0	1,632	0
Netherlands	1,851	−10.0	639	+11.1
France	1,610	−10.0	1,369	+11.1
Italy	1,430	− 2.8	1,756	+ 2.9
Brazil	1,243	− 3.0	942	+ 3.1
Belgium	1,138	−10.0	639	+11.1
Venezuela	924	− 1.9	1,298	+ 1.9
Australia	843	−10.0	807	+11.1

International Business Reports

Economic Survey on Canada. Published by the Organization for Economic Cooperation and Development. Released February 1973. 90pp. $1.

The first part of this survey is devoted to an examination of longer-term labor market trends and the regional problem in Canada. Chapter II then reviews recent developments in the fields of demand, output, labor markets, costs, prices and the balance of payments. This is followed by an analysis of fiscal and monetary policy in Chapter III. Chapter IV discusses short-term economic prospects, and offers some comments on possible future approaches.

The recovery of Canadian economic activity since 1970, although somewhat uneven, has been relatively satisfactory, reports the OECD, and growth is likely to continue at a rate well above potential throughout 1973. The main current policy problem is how to reconcile such a development with reasonable price stability.

Write: OECD Publications Center, 1750 Pennsylvania Ave., N.W., Washington, D.C. 20006.

Investment Laws of the World. Prepared by the International Centre for Settlement of Investment Disputes. $75 per looseleaf binder.

This service will collect, classify and disseminate national legislation and international agreements relating to foreign investments in a series of five binders, 10 countries per binder. The first binder is now available and the remaining four are scheduled to be issued before the end of 1973.

The service, in its first phase, will deal with the laws of the developing nations—a combination of constitutional, legislative and treaty material — computer-prepared and coded for uniformity of treatment, country-by-country. Coverage of more than 50 countries is scheduled and expansion to additional nations is anticipated.

Write: Oceana Publications, Inc., Dobbs Ferry, New York 10522.

Domestic Taxation and Foreign Trade: The United States-European Border Tax Dispute. By Michael von Steinaecker. 169pp. $15.

Approaches the border tax dispute between the U.S. and the EEC from both the legal and the economic standpoints. Summarizes and makes recommendations regarding related GATT regulations and changes. Studies the economic effects of different tax structures on world production and trade as well as the relationship between different kinds of border tax adjustments and national tax sovereignty.

Write: Praeger Publishers, 111 Fourth Ave., New York, N.Y. 10003.

Economic Survey for Australia. Published by the Organization for Economic Cooperation and Development. February 1973. 99pp. $1.

Every year, the OECD Economic and Development Review Committee reviews the economy of each of its member countries, based on a memorandum submitted by the country concerned and documentation prepared by the Secretariat. The published Economic Surveys which emerge from these reviews concentrate on immediate economic policy, but also include appraisals of longer-term policy issues.

Australia joined the OECD in 1971 and the first review of the Australian economy was conducted on Nov. 20, 1972. This publication is the result of that review.

Write: OECD Publications Center, 1750 Pa. Ave., N.W., Washington, D.C. 20006.

Calendar For World Traders

March 6—New York—FCIB luncheon and roundtable conference on international finance, credit collection and exchange problems, Summit Hotel, noon.

March 7-8 — Chicago — 36th Mid-America World Trade Conf., Sheraton-Chicago Hotel.

March 8—Las Vegas—50th Anniversary Banquet of the Overseas Automotive Club during the 1973 PAS-IASI Show, Flamingo Hotel, 6:30 p.m.

March 8 — Memphis — Mid-South Exporters roundtable forum on Mexico. Sponsor: Commerce Dept. District Office.

March 14 — New York — Dinner meeting of FCIB Publishers Export Credit Group, Advertising Club, 4 p.m.

March 14—New York—International Executive Assn. luncheon, Summit Hotel. Subject: U.S.-Japan Economic Relations.

March 15—New York—Luncheon meeting of FCIB Chemical and Food Export Club, Advertising Club, 12:15 p.m.

March 15—Pine Bluff, Ark.—Export opportunities conference, Holiday Inn. Sonpsors: REEC and Chamber of Commerce.

March 20—Memphis—World Trade Club meeting, Sheraton Motor Inn.

March 20—Westbury, L.I.—Long Island World Trade Club meeting on Joint Ventures, Westbury Manor.

March 22-23—New Orleans—28th Mississippi Valley World Trade Conference, Fairmont-Roosevelt Hotel.

March 22-23—Washington, D.C.—U.S.-Sudan Trade Development Conference, Mayflower Hotel. Sponsor: Averroes Inc., McLean, Va.

March 29—Cleveland—28th annual Cleveland World Trade Conference, Statler-Hilton Hotel.

Worldwide Business Services

International trade specialists in the Department of Commerce and Foreign Service Officers in the U.S. Embassies and Consulates around the world are continually developing specific commercial opportunities through which American companies can find buyers, agents, partners or investors overseas. One of the major means for communicating these opportunities promptly and accurately to the U.S. business community is through the columns of this magazine.

The section that follows presents details about U.S.-sponsored overseas exhibits, licensing and joint venture proposals, opportunities to sell to foreign firms and government agencies and appoint agents, details on major construction and expansion projects, and notices of U.S. visits by foreign buyers.

U.S. Promotions Overseas

Airport Development Trade Mission. Lebanon, Saudi Arabia, and Kuwait. May 2-14. These countries are anxious to better their airport facilities and are backed by ample hard currency revenues. U.S. industry should have a competitive edge in marketing. Call Fred Crosley, 202-967-2232.

Agricultural, Drainage and Irrigation Equipment Trade Mission. India. May 6-18. This mission seeks to capitalize on the $36 million Indian plan for development for which free foreign exchange has been allocated. It will visit Bombay, Hyderabad, New Delhi and Bangalore. Call Ed Wasson, 202-967-4389.

Metalworking Machinery & Equipment Trade Mission. Spain and Italy. May 7-18. Improved economic conditions with rising consumer demand, substantial new government spending on public sector capital projects and increased private investments in new industrial plants is expected to increase the need for all types of metalworking equipment. Call David Brann, 202-967-4228.

Nor-Shipping '73. Oslo. May 9-15. The fourth international shipping exhibition offers U.S. companies an excellent opportunity to promote their products to Scandinavian users of shipbuiding, marine, cargo, and port equipment. Call A. J. Beiring, 202-967-3838.

Interpack '73. Duesseldorf. May 10-16. This is the largest specialized packaging exhibition in the world. Consumption of packaging machinery in West Germany reached $74 million in 1971, up 11.6 percent over 1970. Call W. S. Gaines, 202-967-4073.

Audio Visual Marketing and Training Aids, Sydney Trade Center. May 14-18. This show and seminar is aimed at a very promising market for imported audio-visual equipment and materials estimated at $6-7 million in 1972. Cal Lee Barnes, 202-967-4678.

Analytical Instruments for Science and Industry. Tokyo Trade Center. May 14-18. Japan is a $100 million market for analytical instruments for science and industry. Consumption is expected to rise 30 percent annually over the next few years. High sales potentials exist for a broad range of instruments and equipment. Call Randy Miller, 202-967-4056.

Minicomputers and Related Peripherals Exhibition. Milan Trade Center. May 15-19. The market for U.S. minicomputers is expanding at 30-40 percent annually, and is wide open. Sales are expected to reach $10 million in 1975. Italian EDP users are moving from large systems to smaller, specialized ones. Equipment to be exhibited includes minicomputers and all EDP peripherals designed for use with minicomputers. Call Noel Negretti, 202-967-2434.

Petroleum-Petrochemical Equipment. Hungary. May 18-28. The Hungarian petroleum industry will purchase during 1973-75 an estimated $110 million worth of machinery, equipment and instrumentation for the exploration, drilling, production, refining, transportation and storage of oil and gas. The Budapest International Fair will concentrate on these products, and in addition to Hungarians is expected to attract buyers and end-users from other major Eastern European countries. Call A. Hertzberg, 202-967-2801.

Microwave Equipment and Components. Frankfurt Trade Center. May 21-25. The German market for microwave products, currently at $65 million, is projected to expand sharply in the next decade, spurred by the development of radio relay, satellite, and waveguide systems, air traffic-control networks, and by rising outlays for defense and space research. U.S. made or designed equipment and components accounts for a leading share of the market with the sales outlook especially promising for items suitable for high frequency applications. Call Bill Gaines, 202-967-4073.

Pulp, Paper and Conversion Equipment. Mexico City Trade Center. May 21-25. Rapidly expanding pulp and paper industries form attractive sales targets in a nearby market. Call Porter Clary, 202-967-5040.

Industrial Process Control Equipment. Stockholm Trade Center. May 22-24. Scandinavian industries, faced with high labor costs, are investing in equipment to increase productivity. Demand is strong for process instruments; control, regulator and selenoid valves; and related process control computer and peripheral equipment. Call your nearest Department of Commerce Field Office.

Industrial Use of Natural Gas Trade Mission. Japan & Australia. May 22-June 8. Steady increase in the availability of natural gas supplies and progressively heavy dependence on this resource by industry creates an especially good market for U.S. manufacturers of industrial equipment and systems associated with natural gas. The mission, limited to 8 to 10 manufacturers, will visit Tokyo, Osaka, Sydney and Melbourne; New Zealand optional. Call Robert Stern, 202-967-2396.

Food Processing Machinery. Beirut Regional Trade Development Office. June 4-8. Lebanese packers and growers are upgrading equipment to process fruits for export. Opportunities exist for establishing representation and selling controlled atmosphere, grading and sorting equipment. Promotion limited to five firms. Call Jack Hearn, 202-967-5767.

Packaging Machinery and Equipment Exhibition. Buenos Aires Regional Trade Development Center. June 11-15. In Argentina the packaging industry is growing 7 percent per year but domestic production satisfies less than 40 percent of the country's demand for packaging machinery. The current market is about $5 million per year. Equipment featuring the latest techniques is in increasing demand, with medium-size and medium capacity machines and equipment having the best sales potential. Call Vicky Eicher, 202-967-4580.

Materials Test and Quality Control Equipment. Milan Trade Center. June 12-16. Featured will be electrical, electronic and sophisticated mechanical equipment for testing and analyzing physical properties of industrial materials and for environment simulation testing. Italy is a good market for American-made testing equipment. The show will be promoted to a wide audience of buyers in Italian industry. Contact Sam Spaulding, 202-967-4508.

Modern Merchandising Equipment. Paris Trade Center. June 18-22. France has developed one of the most advanced retailing systems in Europe, second only to West Germany in the proliferation of large self-service stores. Given the continuing construction, development, and success of American-style supermarkets, shopping centers, and smaller stores, the outlook for U.S. manufacturers of modern merchandising equipment is most promising. Call Samuel Spaulding, 202-967-4508.

Combined EDP and Business Equipment, and Industrial, Scientific, Test and Measuring Instruments Exhibition. Hong Kong. June 18-23. Exports of EDP and other advanced office equipment have risen from $581 million in 1962 to more than $2 billion in 1970. U.S. exports to Hong Kong of instruments in 1971 totaled $3.6 million. For EDP and Business Equipment participation call Tom Pad-

gett, 202-967-4727. For Industrial, Scientific, Test and Measuring Instruments participation call Irvin Lloyd, 202-967-3783.

Achema '73. Frankfurt. June 20-27. The triennial Chemical Engineering Exhibition and Congress is one of the world's most important events in this field. The U.S. Exhibition will feature industrial process instruments, control, regulator, and solenoid valves, related electronic computers, peripheral equipment, parts and accessories. Contact Don Schmadel, BIC-226.

Air and Water Pollution Control. Mexico City Trade Center. June 25-29. Growth of the Mexican market for air and water pollution control equipment is expected to exceed 40 percent by 1974. Imports of sophisticated equipment and engineering know-how in this field are supplied principally by U.S. companies. The Trade Center exhibition coincides with the international meeting co-sponsored by the American Association for the Advancement of Science and the Mexican Government, assuring a large sophisticated audience. Call Fred Tower, 202-967-2325.

Data Transmission Equipment and Input Output Devices. Tokyo Trade Center. June 25-30. The opening of Nippon Telephone and Telegraph's circuits to data transmission on Nov. 12 is expected to stimulate new demands in Japan for data transmission equipment (and computer terminals). Sales of data transmission equipment in Japan in 1971 were estimated at $390 million, including imports from the U.S. of nearly $16 million. Call Bill Dawson, 202-967-3984.

Power, Processing, Industrial Water Purification. Trade Mission/Seminar to Brazil and Argentina. July 8-22. Emphasis will be on equipment and planning required to supply vital energy for industrial plant uses, as both nations are embarked on manufacturing programs and development of additional power sources. Brazil's 1973 import market for power equipment components is estimated at $250 million. Argentina has a 10-year program of electrical expansion underway which may cost $2.6 billion. Call Roger Turner, 202-967-2260.

U.S. Marine Electronics, Communications, Navigation and Instrumentation Equipment. Singapore Trade Development Center. July 9-14. Singapore is a "natural" for servicing the marine industry. The ship building and repair industry has received a tremendous boost from off-shore oil exploration and drilling activities. In this vast oceanic environment, communications and navigation equipment are paramount. In 1971, $15.7 million worth of this equipment was imported. Call Irvin Lloyd, 202-967-3783.

Medical Equipment, Mexico City Trade Center. August 14-17. Mexico's Social Security Institute has major expansion plans for its nationwide system. U.S. equipment is well known and usually preferred by medical doctors, hospital administrators and laboratory technicians. Present imports of $17 million are expected to double within five years. Call Porter Clary, 202-967-5040.

Housewares. Tokyo Trade Center. Aug. 20-25. As recently reported in a leading U.S. business magazine, the demand for American consumer goods "has barely been scratched" in Japan. Japan's 105 million people with more purchasing power than ever before represent a significant new target of opportunity for U.S. exporters of housewares. Call Maury Shea, 202-967-2461.

Sales opportunities in 15 U.S. commercial exhibitions, 22 shows at the 10 U.S. Trade Centers, and 5 Trade Missions are being offered to present and potential U.S. exporters between now and December.

Each Trade Center exhibition is limited to one particular line of products and centers are located in Bangkok, Buenos Aires, London, Milan, Mexico City, Frankfurt, Stockholm, Sydney, Tokyo, and Paris. For further information on the Trade Center shows described or for more facts on U.S. exhibitions, **write:** *Overseas Operations, BIC-218, U.S. Department of Commerce, Washington, D.C. 20230.*

U.S. specialized trade missions are comprised of groups of U.S. businessmen organized by the U.S. Department of Commerce to travel abroad to promote the export of U.S. goods and services produced by their particular industry. **Write:** *Trade Missions, BIC-252, U.S. Department of Commerce, Washington, D.C. 20230.*

LASER 73. Munich. Sept. 4-7. Germany is among the fastest growing markets for lasers and electro-optics in Europe. Growth this year of this $120 million market should be 30-50 percent; the U.S. controls 80 percent. U.S. firms have an opportunity to get into this market at the beginning of Germany's cyclical upswing. Contact Roswitha Augusta, BIC-226.

Medical Management Systems and Equipment. Frankfurt Trade Center. Sept. 10-14. Germany's hospital modernization and expansion program for 1973 to 1975 is expected to be well over $2 billion. Prospects look good for U.S. producers of highly advanced and sophisticated equipment in patient care, EDP and monitoring systems, disposables, sterilization, pollution and contagion control, building services, housekeeping, and food preparation. Contact Don Schmadel, BIC-226.

World Fishing Exhibition. Vigo, Spain. Sept. 12-19. Vigo is the home of the Spanish fishing fleet and because of close proximity to Portugal, offers an excellent market to U.S. manufacturers of navigation equipment, communications equipment, power units, controls and both on-board and plant fish processing equipment. Spain's catch in 1971 was 1.5 million metric tons, second in value in all Western European countries. Spain is also the world's sixth largest shipbuilder. Call Bob Wallace, 202-967-3822.

International Aerospace Show. Sao Paulo. Sept. 14-23. The Brazilian Government is supporting this first aerospace fair. The show is designed to open the doors of the entire Latin American aerospace/airport market to international aerospace companies and provides unique sales opportunities. The focus of the U.S. exhibition will be on ground and airborne equipment and instruments, airport equipment, and aircraft parts, assemblies and accessories. Call Jim Hoye, 202-967-3871.

Industrial and Commercial Refrigeration and Airconditioning Equipment and Components. Paris Trade Center. Sept. 17-21. Research indicates that the French market for refrigeration and airconditioning equipment is expanding at a rapid rate. The market in 1971 was valued at $137 million, and is expected to increase by 43 percent by 1975, reaching an annual level of almost $200 million. Contact W. S. Gaines, BIC-226.

Advanced Cold Chain Equipment. Tokyo Trade Center. Sept. 17-22. Process freezers (particularly quick freezers), automatic product control and handling systems for cold storage warehouses (including computer assisted systems), and refrigerated showcases, will be the focus of this exhibition. Estimated at $10-15 million for imported equipment in 1971, the Japanese market for this product category is expected to grow considerably in the next few years. Call Randy Miller, 202-967-4056.

SAMA '73 (Show for Assemblage, Miniaturization and Automation). Bern, Switzerland. Sept. 24-28. Though most heavily attended by watch manufacturers, buyers from the electronics, food, machinery, chemical and metalworking industries also visit this exhibition. An exceptionally good market exists for U.S. manufacturers of components, assembly systems for small parts, quartz encapsulation and processing equipment, microwelding systems, ultrasonic cleaning systems for miniaturized parts, measure and test equipment and instruments. Call Bob Wallace, 202-967-3822.

Algiers International Trade Fair. September. The United States will participate in this major trade event, an unparalleled opportunity to enter a $1.5 billion import market. All product groups will be included, especially the following: infrastructure and construction; information retrieval systems; office equipment; oil and gas equipment and services; irrigation and agribusiness equipment and services; and transportation equipment. Call David Christensen, 202-967-2307.

ENVITEC '73. Duesseldorf. Oct. 8-14. This comprehensive specialized trade show in the field of environmental protection covering air, water, and noise measurement and control equipment will be held at the new Duesseldorf fair grounds. Protecting the environment is a major concern in Germany. Approximately $9 billion will be spent during the 1971-1975 period for pollution equipment. Call Robert Levine, 202-967-4056.

Food Processing, Packaging Equipment and Supplies. Milan Trade Center. Oct. 9-13. New living patterns and rising standards are resulting in increased food consumption and a demand for convenience foods. Scheduled concurrently with the large IPACK-IMA packaging exhibition at the same Fairgrounds, this show offers American firms an excellent opportunity to sell to the Italian food process-

ing industry which will be attracted both by IPACK-IMA and special Trade Center promotional events. Call Sam Spaulding, 202-967-4508.

Audio-Visual Equipment. Frankfurt Trade Center. Oct. 11-16. Use of audio-visual equipment is expected to reach approximately $300 million by 1975. U.S.-made equipment is in the forefront of developments for the West German market. This exhibition, to be held concurrently with the Frankfurt Book Fair, will give U.S. manufacturers, especially those not yet in this market, an opportunity to gain a large share of sales. Contact Loretta Allison, BIC-226.

Technology 73. Tel Aviv International Trade Fair. Oct. 23-31. Three product groups will be exhibited: instrumentation, electrical power generating equipment, and ground power support equipment for commercial aircraft. Call Franc Manzolillo, 202-967-3752.

Environmental Pollution Control Equipment. Osaka Fair Grounds. Nov. 7-12. Reflecting the high priority Japan attaches to its increasing environmental pollution control problems, Prime Minister Tanaka has indicated their solution will be a major objective of his administration. Commerce's participation in this event will focus on air, water, and solid waste pollution control equipment. Call Bob Levine, 202-967-4057.

Systems for Automation in the Metals Industries. Frankfurt Trade Center. Nov. 12-16. Automation systems and components are in demand in West Germany by the machine tool industry and other metal industries from iron and steel production to finished product manufacturing such as automobiles and household appliances. Call Charles M. Whitley, 202-967-4961.

Systems '73. Munich. Nov. 27-30. Europe's most important computer exhibition will promote the latest EDP hardware, software, and accessories to key end-users in a 24-country marketing area. Demand in West European countries is projected to reach $4 billion in 1974. Ambitious national programs to sharply increase computer installations throughout Eastern Europe promise growing sales opportunities for a broad range of EDP equipment and services. Call John Wolf, 202-967-4941.

Microwave Circuits, Components and Instrumentation. Tokyo Trade Center. Dec. 3-8. Sales in Japan of microwave products were approximately $200 million in 1971 and future demand is forecast to expand at 16 percent annually. The Nippon Telephone and Telegraph Public Corporation's (NTT) liberalization of its lines for data transmission in November 1972 is expected to stimulate additional interest in microwave equipment. U.S. producers have an opportunity to expand sales in Japan by directing marketing activities toward original equipment manufacturers. Call Maurice Shea, 202-967-2461.

Microcircuits, Design, Test and Production Equipment. Frankfurt Trade Center. Dec. 10-14. This exhibition is planned to help U.S. firms successfully enter and compete in this very rapidly expanding, highly competitive microelectronics market. The United States still has a technological lead but lead time is getting shorter every year. Call Don Schmadel, 202-967-4601.

Licensing, Investment Abroad

Licensing and investment proposals from foreign firms are listed in these columns. Specific product interests in each proposal are highlighted in bold type to facilitate identification and each proposal is preceded by the appropriate four-digit product number taken from the Standard Industrial Classification (SIC) Manual.

Background information on opportunities abroad and assistance on overseas investments are available from the Office of International Finance and Investment, BIC-287, U.S. Department of Commerce, Washington, D.C. 20230. "P" numbers should be used when responding to specific proposals.

WTD indicates that a World Traders Data Report containing financial and background information on the foreign firm is available for $5 from the Department of Commerce, BIC-266, Washington, D.C. 20230, or from any Commerce Field Office.

OPIC indicates that the country involved is eligible for investment insurance coverage written by the Overseas Private Investment Corporation. Information regarding applicable coverage may be obtained from OPIC, Washington, D.C. 20527.

0291—**JORDAN**—Joint venture sought to establish **modern dairy and poultry farm.** U.S. partner to have 49 percent equity; supply machinery, raw materials and technical know-how. One thousand acres with six deep well pumps available. Project to include 100 milk cows, 500 milk sheep, 10,000 chickens and 200 calves. David Odeh, P.O. Box 1215, Amman, Jordan. Cable: ISLOFF, Amman. WTD. P-73147.

1450, 3250—**IRAN**—Technical assistance contract, process license, joint venture, or any combination of these arrangements sought by company organized by Industrial Credit Bank to manufacture **ceramic tiles.** U.S. collaborator must be substantial firm, experienced in the industry. Total investment estimated at $5.5 million. Local capital available but, if U.S. collaborator interested in equity investment, can acquire up to 50 percent, subject to negotiation. Completed plant feasibility study cites initial output of 500,000 6"x6" tiles per day. The Iranian market is estimated at 178 million tiles a year, rising to 500 million by 1977. About 95 percent of high quality raw materials are available in Iran. C. Niknafs, President, Naghshe-Jahan Tile and Ceramic Co., Ave. Ateshkadeh, Tehran. P-73136.

1474—**BRAZIL**—Newly organized company affiliated with major Brazilian interests seeks know-how and techniques for **developing and mining large potash reserves** near Carmopolis, Sergipe. Investment of $120 million projected for production unit alone. Additional information available to American firms experienced in solution mining (Frasch process) from Office of International Finance and Investment. BIC-287, U.S. Department Commerce, Washington, D.C. 20230. P-73151. OPIC.

2076 — **TURKEY** — Know-how and machinery to process 200 tons of **sunflower seed oil per day.** Also plans to produce **oil cakes for animal feed and concentrated cherry juice.** Major producer of industrial ventilators, air conditioners is expanding activities. Alarko Sanayi Ve Ticaret AS, Necatibey Caddesi No. 84, Karakoy, Istanbul. P-73130.

2431—**MALTA**—Joint venture sought to manufacture **woodworks for export.** Firm offering up to 44 percent equity and share in management. Established in 1970, has 28 highly-trained employees and 3 700 sq.ft. factory space. Could rent 25,000 sq.ft. additional space. Abbott and Dominic Woodworks Ltd., 9 Jetties Wharf, Marsa, Malta. P-73139.

2641, 3842—**ISRAEL** — License or joint venture to manufacture all kinds of **adhesive tapes,** including cellophane, surgical tape, bandage strips and even wallpaper. Would purchase necessary machinery from U.S. participant. Can provide capital for proposed project. Newly organized firm now importing food and housewares. Company claims shortage of tape products which are mainly imported. A. Czarninski, RANDI Co., Ltd., 5 Barzilai St., Tel Aviv. P-73140.

2641, 3861 — **SWITZERLAND** — Firm seeks licenses for the manufacture of **chemically treated or impregnated temperature, humidity, oil and petrol resisting paper for use as insulating material; sensitized paper for the chemical industry, photocopying and similar purposes; novelties in the field of chemical treatment and impregnating of paper and paperboard.** Specializes in chemical and other treatments of paper and paperboard for various uses. Employs 40 in a highly automated plant; affiliated with Papierfabrik AG, Cham. Mr. Stuck, Aerofiber AG, 6330 Cham, Switzerland. WTD. P-73154.

2821 — **TURKEY** — License, necessary equipment to manufacture **sodium carboxymethylcellulose.** Would produce 5,000 tons annually. Use cotton linter as raw material. Firm indicates 3,000 tons currently imported yearly, expects raise in consumption. Akon Burduroglu, Cukurova Holding AS, Buyukdere Caddesi 14. Sisli, Istanbul. P-73127.

2834 — **AUSTRIA** — U.S. chemist holds six-month option to **purchase pharmaceu-**

tical firm. Company has rare concession to produce, distribute, export all types of pharmaceuticals. Interested American companies can acquire all or part interest in Austrian enterprise. Purchase price around $86,000. Richard Roland, Konrad Dudengasse 51, A-1130 Vienna. P-73133.

2834—VENEZUELA — Seeks joint venture to **manufacture pharmaceuticals** or serve as distributor. Moving into new building in near future. Laboratorios Spefar Venezolanos, S.A., Attn: Milton Loayza, Asst. Manager, Apartado 327, Caracas. WTD. (Correspondence requested in Spanish). P-73138.

3079 — FRANCE — License to manufacture **plastic septic tanks.** Firm currently produces purifying equipment, septic tanks and agricultural equipment. Employs 15. Jean-Claude Storti, manager, Societe Jean-Claude Storti, Zone Industrielle, 47000 Agen-Boe (Lot & Garonne), France. WTD. P-73126.

3079—INDIA — License to manufacture **hydraulic, corrugated metal and teflon hoses; also hose assemblies**. Cost of proposed plant estimated at $900 000. U.S. participant requested to help obtain production equipment. Indian firm presently distributes hose and fittings for industrial, agricultural and automotive equipment. Equipment, 10-1 Princep St., Calcutta-700013. West Bengal. WTD. P-73152. Further details available from the Office of International Finance and Investment. BIC-287, U.S. Department of Commerce, Washington, D.C. 20230.

3351, 3354—UNITED KINGDOM—Major extruder of copper, steel, aluminum alloys seeks licenses to manufacture **nonferrous fabricated products** which offer substantial growth potential. Also interested in processes in the metal handling and finishing fields; consideration will be given to proposals involving non or semimetallic items. Established in 1894; employs 1,000. Is subsidiary of McKechnie Bros. Ltd. D. H. Watkin, McKechnie Metals Ltd., Middlemore Lane. Aldridge, Walsall WS9 8DN, England. P-73143.

3421—INDIA—Leading manufacturer of textiles, engineering, chemicals and wire ropes seeks to expand present line of business with a **razor blade plant.** Envisages the manufacture of 150 million stainless steel and 100 million carbon steel safety razor blades. Expressed interest in obtaining technical assistance to manufacture razor blades. Mrugesh J. Harivallabhdas, director, Shri Ambica Mills Ltd., Kankaria, P.B. 112, Ahmedabad 8, India. WTD. P-73155.

3421—INDIA—Distributor of cosmetics, aromatic chemicals, flavoring essences and engineering equipment seeks to diversify by manufacturing **safety razor blades;** seeks American technical know-how. Plans to construct a plant in Maharastra capable of manufacturing 150 million stainless steel and 100 million carbon steel safety razor blades annually. Vithal Vaman Muthye (VVM), 11 Shamshet St., Chhipi Chawl, Bombay 400 002, India. WTD. P-73153.

3433 — TURKEY — Major firm plans to diversify. Seeks licenses to produce **floating roof spherical tanks and elevated water tanks; large exchangers; evaporators and digestor columns; industrial furnaces; steam boilers; and capacitors.** Presently manufactures industrial ventilators, heating units and air conditioners. Alarko Sanayi Ve Ticaret AS, Necatibey Caddesi No. 84, Karakoy, Istanbul. P-73129.

3443, 3536—BRAZIL—Well-known metal fabricating and erection firm seeks licenses and/or joint venture to manufacture **cargo containers and container handling equipment.** Government plans to modernize materials handling facilities at Brazilian ports. Magno Villaca Mendes, commercial director, Isomonte S.A.—Equipamentos e Montagens Industriais, Rua Raulo de Assuncao 88, 32000 Contagem, Minas Gerais, Brazil. WTD. P-73150. OPIC.

3500 — BELGIUM — Wire manufacturer with engineering and production facilities for wire drawing and affiliated industries seeks diversification through licensed manufacturing and marketing in EEC and surrounding countries of **special industrial machinery.** Particularly interested in rubber and plastics machinery, packing machinery, handling equipment, pollution control equipment, industrial robots and special machine tools. Additional information available from Jean-Michel Gal, Trade Promotions, European-American Banking Corp., 10 Hanover Square, New York, N.Y. 10005. P-73135.

3540—KOREA—Joint venture to manufacture **machine tools, office machines.** Seeks capital, technical know-how. U.S. participant offered 49 percent equity. Specific interests include machine and hand tools, electronic tools, toys. Mr. Kim, Chan-bum, Sechin Industrial Co., Room 206 Chasung Bldg., 32-1. 2 ka, Myung-dong, Chung-ku, Seoul. WTD. P-73131. OPIC.

3559—BELGIUM—License to manufacture **plastics working machinery.** Major producer of wire and wire products. Operates 38 plants in 14 countries. Has well-equipped R&D facilities. G. Pil, diversification manager, Bekaert Engineering, Bekaertstraat 1, 8550, Zwevegem, Belgium. P-73128.

3559—UNITED KINGDOM—Member of major water treatment group diversifying. Seeks manufacturing rights for **instrumentation for water, automatic control systems for treatment of water, other fluids and additional sterilizing processes.** Specific interests within these product areas include ultra violet sterilizers, selective iron electrodes and automatic PH control systems. Group has wide contacts throughout water treatment industry. Manufacturing, technical marketing facilities. J. E. Chesney, marketing manager. Chlorination Equipment Ltd., Cannon Lane, Honbridge, Kent, England. WTD. P-73142.

3560—UNITED KINGDOM — Manufacturing rights for **pumps and valves, fluid handling equipment, boiler room machinery, small steam turbines, evaporators and distillation apparatus.** Firm produces heat exchanger cleaning systems, thermo-probes and high pressure water level gauges. Employs 300. B. S. Bass, Diamond Power Specialty Ltd., Buckingham House, 6/7 Buckingham St., London, W.C.2, England. P-73132.

3569—FRANCE—Manufacturer and seller of plumbing equipment, sprinklers, hydrotheraphy apparatus seeks license to manufacture **automatic fire sprinklers.** Established in 1906; annual sales $1.3 million; employs 85. Pierre Geraudie, chairman and general manager, Etablissements Doyer S.A., B.P. 33, 75526, Paris. WTD. P-73158.

3569 — FRANCE — Licenses to produce **packaging machinery.** Of particular interest are tray-making machinery; palletizers; equipment for hot-melt closure of cardboard boxes; and case-making machinery. Firm currently manufactures special machinery for the glass, steel, chemical and packaging industries. Employs 260. operates several plants. Is part of Saint-Gobain group. M. Popoff, commercial manager, Ateliers de Construction de Compiegne, B P. No. 8, 60202-Compiegne, France. Company brochure available on loan basis from Office of International Finance and Investment, BIC-287, U.S. Department of Commerce, Washington, D.C. 20230. P-73141.

3576 — FRANCE — Manufacturer/distributor of automatic and electronic weighing machines and instruments seeks license to manufacture American **electronic weighing machines.** Established in 1886; employs 70; owns and operates workshops and warehouses Jean-Louis Escharavil, manager, Escharavil Freres SARL, Le Ruissol Veyras Zone Industrielle, 07000 Privas, France. WTD. P-73156.

3613 — GERMANY — Seeks licenses for the manufacture of **bus ducts, molded case circuit breakers for low voltage systems.** Paul Diener, Diener-Brand Industrie Produkte, 6241 Mammolshain, Kronthalerstr. 3, Germany. WTD. P-73146.

3811—GERMANY—Large manufacturer seeks cross-licensing rights for **complete line of laboratory furniture and equipment;** includes cabinets, working tables with sinks, ventilation ducts, explosion valves, hollow partitions. Also, desires licensing rights from U.S. firms to produce similar **sophisticated laboratory furnishings.** Presently manufactures heating stoves, boilers, ranges, built-in kitchens, laboratory furnishing. Employs 2,300. Joachim Schegel, W. Ernest Haas & Sohn, POB 46, 6346 Sinn/Dillkreis, Germany. WTD. P-73145.

3823 — FRANCE — Manufacturer of weighing instruments seeks license to manufacture **sensors and strain gauges** used in the food, chemical, steel industries and the public works field. Engaged in market research on weighing systems; established in 1966; employs 40. Pierre Arfos, general manager, Pesage-Promotion SARL, 4 Ave. du Chemin de Fer, 93800 Epinay-sur-Seine, France. WTD. P-73157.

3993—SWITZERLAND—Leading manufacturer/distributor of novel equipment and **items for decorative purposes, window displays, and exhibitions** seeks diversification, technical assistance and licenses for products which are compatible with present activities. Items may include decorative self-adhesive foils, modular exhibition systems, audio visual equipment, accessories for construction of exhibition stands. Well-equipped plant with printing facilities. Employs 20. John Miescher, manager, Peter Giss AG, Munchensteinerstrasse 270, 4053 Basel, Switzerland. WTD. P-73144.

5161 — SOUTH AFRICA — Large, well-established international trading firm with annual turnover reportedly exceeding $50 million, largely in minerals and basic commodities, seeks joint venture partner in **chemical trading field.** Candidates should be active in chemical importing and exporting. Firm has offices in South and Central Africa, European

centers, the Middle East, Far East and Australia. Further information available from Jean-Michel Gal, Trade Promotions, European-American Banking Corp., 10 Hanover Square, New York, N.Y. 10005. P-73134.

7011—GREECE—Prominent businesman and hotel operator seeks collaboration with U.S. firm for **construction of 500-bed-hotel** in Kavala. Will consider management contract, franchise agreement or joint venture for $3 million facility. Kavala is a fast growing tourist area with regular communications to Thassos Island; international airport is to be completed by 1976. Also desires working relationship with a travel agency. George Apostolopoulos, 51 Venizelou St., Kavala, Greece. P-73148. OPIC.

7525—HONDURAS—Joint venture to install **several parking installations** in Tegucigalpa, later San Pedro Sula. Seeks to utilize portable structures; purchase equipment in United States. Lic Rodolfo Luna Moran, Edificio Midence Soto 401, Tegucigalpa, D.C., Honduras. P-73149.

Licensing In U.S.

For additional information on opportunities to manufacture foreign firms' products in the U.S., write the Office of International Finance and Investment, BIC-286, U.S. Department of Commerce, Washington, D.C. 20230 (202-967-2248), referring to the appropriate file number.

AUSTRIA — Inventor. Product: Device designed to **test the authenticity of banknotes** through use of optical and/or electric sensors. **File 2341**

GERMANY — Inventor. Product: Industrial wastewater treatment equipment. **File 2342**

GERMANY — Small company. Product: Patented **venetian blinds with adjustable vertical louvers** made of vinyl-coated fabric. **File 2343**

SPAIN—Inventor. Product: Special clasp which allows **automobile snow chains to be mounted on tires** and removed in a matter of seconds without need of moving the wheels in any direction. **File 2344**

SWITERZERLAND — Small company. Product: Patented **fasteners for joining wooden or other nailable surfaces** and parts. Used in building and woodworking trade, and in shipping rooms for manufacture of crates and pallets. **File 2345**

SWITZERLAND — Market and product developers. Product: **Novelty capless tube** for cosmetic, household, medical or food products. **File 2346**

SWITZERLAND — Inventor. Product: New type of **patented bathtub. File 2347**

SWITZERLAND — Manufacturer of heavy-duty **hydraulic equipment.** Products: equipment for synchronization of unequally loaded hydraulic cylinders (e.g., lifting platforms); geared and rotating vane-type pumps for pressures up to 2150 psi; axial piston-type pumps for pressures up to 5000 psi; standard pumps (power units) for three phase and d.c. supply; hydraulic control and regulating devices such as lowered valves, control valves, multiple way taps, and directional valves; complete hydraulic and electro-hydraulic control systems for industrial applications; lifting ramps, platforms and similar hydraulic materials handling equipment. **File 2348**

SWITZERLAND—Manufacturer of furniture modules. Product: Special **space-saving storage device** to be used with L-shaped furniture. **File 2349**

SWITZERLAND — Prominent manufacturer of advanced electronic equipment. Product: Fully transistorized multi-purpose **portable metering devices** for surveying purposes. **File 2350**

SWITZERLAND—Small company. Product: Six different **shank type cutters and two plain milling cutters** for use with machine tools in rough milling operations. **File 2351**

Major French Firm Wants To Distribute Special Chemicals

A large chemical company wants to represent U.S. manufacturers in marketing their products in France. The company manufactures fertilizer, ammonia, adhesives, industrial gases, urea, acids, and cattle feed supplements. Major customers include firms in the glass, paper pulp, industrial chemicals, and edible foodstuffs industries. A representative currently visiting the U.S., also seeks licenses and joint venture agreements. Write or call: G. Cousserans, Azote et Produits Chimiques, c/o Saltcake Sales Corp., 230 Park Ave., Suite 623, New York, N.Y. 10017 (212-689-6038). P-73137.

Developing Nations Seek UNDP Assistance For Fifteen Projects

Developing nations have submitted 15 requests for assistance in various projects to the Director of the United Nations Development Program. These are preliminary requests which have not been approved at any stage, and no funds have been allocated. Summaries on these projects are available to U.S. firms so that they may determine whether to prepare appropriate presentations if the project is approved.

Summaries for each of the listed projects are available to U.S. firms upon request from the Trade Opportunities Staff, BIC-267, Office of Export Development, U.S. Department of Commerce, Washington, D C. 20230. Firms should include a pre-addressed label and identify each project desired by project number and country name.

COS/72/012/A/01/12 — Costa Rica — **Agricultural diversification** of farms with trees and macadamia;

COS/72/028/A/01/01 — Costa Rica — Preparation of the **national development plan;**

ECU/72/011/A/01/01 — Ecuador — Strengthening of the **petroleum** sector;

ECU/71/534/A/01/15 — Ecuador — Assistance to the **Civil Aviation Board.**

ELS/72/010/A/01/16 — El Salvador — **Hydrometeorology.**

GUI/72/006/A/01/42 — Guinea — Study and Assistance for Administrator of the Office of **Finance and Management** (Available in *French* only).

IRQ/70/523 — Iraq — **Educational research** center (phase II).

PAN/72/010/A/01/12 — Panama — **Fruit and vegetable marketing.**

PAN/72/014/A/01/12 — Panama — **Forestry** surveys and demonstration — second phase: Western Highlands.

IND/72/041/A/01/37 — India — Establishment of a pilot and demonstration plant in **hydrostatic extrusion and material synthesis** at the National Physical Laboratory, New Delhi.

THA/72/016/A/01/14 — Thailand — Community **water** supply.

THA/72/029/A/01/13 — Thailand — Promotion of **teaching science and technology** (phase II).

THA/71/540/A/01/37 — Thailand — Establishment of the **textile** industry division.

INT/72/073/A/01/40 — Interregional — Advisory services for **multilateral trade** negotiations.

RAS/72/071 — Fiji, Khmer Rep., Laos, Nepal, Philippines and the Republic of Vietnam. Asian Center for Training and research in **social welfare** in the context of social development.

UNDP Approves 23 Country Programs For Developing Economies

The Governing Council of the United Nations Development Program approved an additional 23 integrated country programs at its January session, bringing its total to 58 to date. The new programs cover: Brazil, British Solomon Islands, Burma, Cuba, Dahomey, Ecuador, Egypt, Guatemala, Haiti, Israel, Ivory Coast, Jordan, South Korea, Malawi, Nepal, Western Samoa, Singapore, Syrian Arab Republic, Thailand, Tonga, Yemen, Yugoslavia and Zambia.

The integrated country programs are in two parts: The *Country and Intercountry Program* provides a brief statement of the country's current overall development objectives and priorities; description of sectoral needs proposed to be met with UNDP assistance; preliminary list of projects with estimated government and UNDP financial participation and the preliminary list of projects with tentative timetables; *Recommendations by the Administrator of UNDP*, summarizes the country programs and recommends the level of UNDP participation. The recommendations include dollar estimates by periods and by sectors. UNDP dollar inputs are known as IPF (Indicative Planning Figures).

Limited number available

The Trade Opportunities Staff of the Office of Export Development, BIC-267, U.S. Department of Commerce, Washington, D.C. 20230, has a limited number of copies of the Country Program and UNDP Recommendations available to interested U.S. firms on a loan basis. Inquirers are requested to send pre-addressed labels.

Foreign Trade Opportunities

These trade opportunities are based on reports received from the U.S. Foreign Service by the Trade Opportunities Division, BIC-267, U.S. Department of Commerce, Washington, D.C. 20230. The commodities in which foreign firms have interest are indicated by the five-digit numbers and commodity classifications which are from the Standard Industrial Classification (SIC) Manual and the Numerical List of Manufactured Products, 1967 Census of Manufacturers, used extensively by Government and industry.

U. S. firms should be aware that the listing in Commerce Today *of opportunities to trade in specific commodities and technical data does not necessarily imply approval of their export by the Department of Commerce pursuant to the Export Administration Act of 1969. Applicable export licensing regulations must be followed.*

Every effort is made to include only firms or individuals with good reputations. However, the Department cannot be responsible for any trade relations.

Abbreviations used are: I (importer); D (distributor); M (manufacturer); A (agent); R (retailer). To avoid delays, requests for loan material should specify the country, commodity and foreign government agency.

WTDR indicates that a World Traders Data Report on this specific firm is available for $5 from the U.S. Department of Commerce, BIC-266 Washington, D.C. 20230. A WTDR is a trade profile which contains commercial information, including financial references, on an individual foreign firm. Orders must include complete name and address of the subject firm and be accompanied by payment. Further information concerning WTDR's and request forms is available at local Commerce Field Offices.

The mark (•) indicates that this trade opportunity is a request for bids by a foreign government agency.

Direct Sales

Specific foreign firms have expressed interest in direct purchases of the products below. See also the "Agencies" listing.

Field crop farms

01610 — JAMAICA — Dry baby lima beans for canning. Quantity: 5 tons per mo. Quotations c.i.f. Kingston. Roberts Products Co. Ltd., Contact: Mr. Robert J. Evelyn (I, M), 7 Norwich Av., Kingston 11. WTDR 2/73.

Ferroalloy ores

10690 — INDIA — Fifteen metric tons molybdenite (molybdenum ore) suitable manufacturing laboratory chemicals. Apex Chemicals (M), 117 Himalaya House, Palton Rd., Bombay 400 001, Attn: P. V. Gandhi.

Canning, preserving foods

20361 — AUSTRALIA — Frozen white fish fillets, suitable for carryout establishments. White Wings Ltd. (R), P.O. Box 63, 52 Balfour St., Chippendale, NSW 20008. WTDR in prep.

20362 — ITALY — Frozen bone squid (loligo vulgaris), preferably frozen on board. Quote c.i.f. Italian port. Romexport S.R.L., Attn: G. Landi (I, D), Via Giovanni Caselli 34, 00149 Rome, Telex 61436.

Grain mill products

20411 — LIBYAN ARAB REP. — 300,000 tons of wheat flour; 100,000 tons of semolina; urgently need; as per c&f Tripoli Port, L.A.R. Companies should give conditions of shipment and time of delivery. Shebco, Mr. Issam Ibraheen, Commercial Mgr. (I, A, D, R, M, contractors), P.O. Box 626, Tripoli. (Cable: Sheibany). WTDR 4/72.

20440 — LIBYAN ARAB REP. — 100,000 tons of regular milled white rice, as per c&f Tripoli Port, L.A.R. Companies should give conditions of shipment and time of delivery. Shebco, Attn: Mr. Issam Ibraheen, commercial mgr. (I, A, D, R, M, contractors), P.O. Box 626, Tripoli. (Cable: Sheibany). WTDR 4/72.

Broad woven fabric mills, cotton

22110 — ZAIRE — Fifty-inch grey cotton shirting. Specifications: 68x68; 30/30. Requests f.o.b. quotations. Amato Freres (M), B.P. 3181, Lubumbashi. WTDR in prep.

22118 — SPAIN — Cotton sheets. Julian Alonso Enamorado (I, D), Arenas 19, Parla, Madrid.

Broad woven fabric mills, manmade fiber, silk

22213 — GREECE — Shirting, pajama material, synthetic or cotton. K. Panidis Co. (I, M), 30 Venizelou St., Thessaloniki. WTDR 1/69. Samples of fabrics and quotations requested. Also interested in fabrics from stocks.

Textile goods

22940 — SPAIN — New cotton cleaning rags, for machinery, all colors. Julian Alonso Enamorado (I, D), Arenas 19, Parla, Madrid.

Men's, youths', boys' furnishings, work clothing

23292— CANADA — Ski clothing; men's, boys. Reid & Pattee Sporting Goods Ltd. (D, R, M), 1291 Wellington St., Ottawa, Ontario KIY 3A8. WTDR in prep.

23292 — SWITZERLAND — Cotton track suits, with/without hood, typical American college style. Merboso, AG (I, M, D), Badenerstra. 812, CH-8048 Zurich. WTDR 4/72.

Women's, misses', juniors' outerwear

23393 — CANADA — Ski clothing; women's, girls. Reid & Pattee Sporting Goods Ltd. (D, M, R), 1291 Wellington St., Ottawa, Ontario K1Y 3A8. WTDR in prep.

Millwork, veneer, plywood, prefabricated structural wood items

24331 — FRANCE — Lumber, wood products, black cherry timbers. Quotations & price lists requested. Societe Meneret (I, D), 72 Quaideschartrons, 33300 Bordeaux. WTDR 2/73.

Wood products

24996 — SPAIN — Fiberboard for manufacture of furniture. El Corte Ingles, S.A. (Department store), Hermosilla, 112 - Madrid 9.

Converted paper, paperboard items

26440 — ITALY — Wallpaper, prepasted, normal, vinylic. F. Citterio (I, D), Via Casoretto 36, 20131 Milan.

26440 — JAPAN — Prepasted or self-adhesive wall paper. Binko Ltd. (I, Exporter), 38 Itabashi-Cho 1-Chome, Naka-Ku, Nagoya.

General commercial printing

27526 — SWITZERLAND — Lithographed pop art posters, modern, decorative picture prints. Drogissa Versand AG. (I, mail order house), Alte Landstrasse 55, CH-8802 Kilchberg.

Greeting card manufacturing

27711 — SWITZERLAND — Specialty papers, reprocessed paper, related novelty materials for local manufacture of greeting cards. Hand Buff & Co., (D, M), 9424 Rheineck.

Industrial chemicals

28180 — ARGENTINA — Betamethylanthraquinone. Supra S.R.L. (I, M), Carlos Tejedor 1544, Lanus, Provincia De Buenos Aires. Interested in immediate purchase. Requests quotations.

28190 — MEXICO — Pigments to color glass in order to widen line of products. Firm also seeking technical assistance in

the mixing of pigments and manufacture of colored glass. Correspondence, preferably in Spanish, should be sent to Sr. Adalberto Guajardo, Mgr. Crista Procesos, S.A. (M, D), Reforma Pte. 2525, Apartado Postal 99, Monterrey, N.L. WTDR in prep.

28190 — MEXICO — 25 tons of aluminum isopropoxide per year. Price quotations f.o.b., Laredo, Texas. Manufacturas y Procesos Industriales, S.A. (M), Ing. Raymundo Catano B., Apartado Postal 2500, Monterrey, N.L. WTDR 5/72.

Synthetic materials

28210 — GERMANY — Blanks (methyl acrylate base) for the production of soft, hard contact lenses. c.i.f.; delivery against invoice. Direct purchase & agency. Soehnges Optik, Wilhelm P. Soehnges, Contact Herr Haberzettl (M, I, A), D-8000 Muenchen 2, Postfach 202207. WTDR 2/73 (cable 13).

28211 — SWEDEN — PVC — sheets to be used as outside wall covering of buildings. AB Interpares (I, D), Box 961, S-701 32 Orebro.

28213 — FRANCE — Cellulose acetate; rigid polyvinyl chloride; high & low density polyethylene; granulated, ground, film wastes. INDCO. (I), 2 Ave. de la Plaine Fleurie, 38240 Meylan.

28215 — ITALY — Industrial adhesives (plastic). F. Citterio (I, D), Via Casoretto 36, 20131 Milan.

Paints, varnishes, lacquers, enamels

28516 — BELGIUM — Floor finishes, urethane and other industrial epoxies. Direct purchase & agency. Durox Belgium S.A. (M, I, A), Ave. Jean De Bologne, 22, 1020 Brussels. WTDR 12/72.

Agricultural chemicals

28711 — ITALY — Ammonium sulphate fertilizer with 20% nitrogen content. Quote c.i.f. Italian port and state minimum quantity which must be ordered. Correspondence preferred in Italian but English acceptable. IMO Galanti & C. (I, D, R), Via Lago Ascianghi 4, 04100 Latina. WTDR 6/72.

28712 — ITALY — Di-ammonium phosphate fertilizer. Quote c.i.f. Italian port and state minimum quantity which must be ordered. Correspondence preferred in Italian but English acceptable. IMO Galanti & C. (I, D, R), Via Lago Ascianghi 4, 04100 Latina. WTDR 6/72.

Rubber footwear

30210 — JAMAICA — Waterproof boots: insulated, for use in refrigeration compartments of reefer ships; 1,000 pairs. Brochures, price lists requested. The shipping Assoc. of Jamaica. Contact: Mr. Noel Hylton. 161 Water Lane, Kingston.

Fabricated rubber products

30694 — BELGIUM — Floor covering, rubber. Direct purchase & agency. Durox Belgium S.A. (M, I, A), Ave. Jean De Bologne, 22, 1020 Brussels. WTDR 12/72.

Plastic products

30791 — ISRAEL — PVC/melamine or polyester film FWG chipboard covering. Yearly requirement: 150-200,000 sq. ft. Furniture Industry "Hkborea" (M), Post Hazoreq'pupm, Attn: Mr. Mar-ner, Mgr.

30795 — SWEDEN — Copper-clad laminates, basic material for fabrication of printed circuit boards. Televerkets Industriavdelning, Attn: John Hammarstrom. (M), Fack, S-149 01 Nynashamn.

30798 — SWITZERLAND — Mass produced plastic novelties, general consumer goods, household gadgets, pop articles, suitable for mail order business. Drogissa Versand AG. (I, mail order house), Alte Landstrasse 15, CH-8802 Kilchberg.

Leather tanning, finishing

31111 — TAIWAN — Cattle hide, grain leather, soft finish, 1.0/1.1 mm thick or rawhide of Jersey and dairy cow. Miller Ski Co., (Taiwan), Ltd. (I), Rm. No. 901, Traders' Bldg. 65 Nanking E. Rd., Sec. 3 Taipei.

31111 — UNITED KINGDOM — Finished black cowhide, lots of 300 hides ea. Quality known in Britain as "Conolly Hide" or equal. Used as covering for steering wheels of automobiles. Uses one lot of 300 hides per week. Samples requested. Formula Leathercraft Ltd. (M, D, Exporter), 10/22 Bank St., Gravesend, Kent. Contact R. A. Allen.

31113 — TAIWAN — Rough, russet and crust leather (buckskin, goatskin, etc.). Miller Ski Co., (Taiwan), Ltd. 10. (I), Room No. 901, Traders' Bldg. 65 Nanking E. Rd., Sec. 3 Taipei.

Glass products

32316 — AUSTRALIA — Glass products for tableware, kitchen, art & novelty glassware, cookware, ovenware, ornamental or decorative glassware, smokers accessories. Avantelle Pty. Ltd. (I, R), P.O. Box 2118, Nth. Parramatta, N.S.W. 2151.

Pottery, related products

32690 — SWITZERLAND — Electric ceramic table lamps, decorative, residential type, modern design, antique reproduction. Prefers East Coast suppliers. Tapeten Spoerri AG, Attn: Mr. P. Strauss (I, R), Talacker 16, CH-8022 Zurich.

Abrasive, asbestos, nonmetalic mineral products

32961 — FRANCE — Fiberglass insulation products. Ets. Andre Boet & Cie (D), Rue Colbert 59650 Villeneuve D'Ascq.

Steel mill products

33127 — GERMANY — Cold rolled steel coils, 10-15,000 tons quarterly. Quote price c.i.f. Antwerp or Rotterdam for shipments in May/June as well as for later delivery. Habra, Stahlhandelsgesellschaft mbH; Contact: Juergen Haupt, Mgr. (I, A, D), 433 Muelheim/Ruhr, Bergmannstr. 29.

Iron, steel foundries

33213 — PORTUGAL — About 25,000 meters ductile or similar iron pipe for use underground potable water system with spec. diameter 800 millimeters; maximum pressure 0.5 kilo per sq. centimeter; maximum daily flow 40,000 cubic meters; velocity of flow about two meters per second. Construtora Moderna, S.A.R.L. (M), Estrada Nacional 10, Amora.

Primary smelting, refining of nonferrous metals

33397 — SWEDEN — Nickel-titanium alloy board with shape memory. ASEA, Attn: I. Stockel (I, M), Kopparbergsvagen 2, S-721 83 Vasteras.

Rolling, drawing, extruding of nonferrous metals

33511 — SWEDEN — Lacquered wire to be used in place of more expensive PVC-covered wire, where the requirement for insulation is minimal. Televerkets Industriavdelning, Attn: John Hammarstrom (M), Fack, S-149 01 Nynashamn.

Nonferrous foundries

33610 — FRANCE — Household utensils; cast aluminum. Cressy A. (I, A, D), 19, Rue Du Colonel Moll, Paris 17.

Cutlery, hand tools, general hardware

34231 — SWEDEN — Mechanics' hand service tools. Handelsfirman Bengt Fredriksson (I, D), Box 303, S-401 24 Goteborg 1.

34231 — SWEDEN — Mechanics hand service tools. Maskinaktiebolaget AKMA (I, D), Box 138, S-381 01 Kalmar. WTDR 1/73.

34291 — GERMANY — Marine hardware. R. Schmitter. Contact: Mr. Rolf Schmitter. (I, A), 5161 Dueren-Guerzenich, Aachener Landstr. 46.

Heating apparatus, plumbing fixtures

34320 — GERMANY — Bubblers, drinking water fountains. Heinrich Umbach (I), 2 Hamburg 1, Schauenburger Strasse 15. WTDR 12/72.

Screw machine products

34521 — CANADA — Square-socket-drive type wood and sheet metal screws for use with power tools by industry. Need over 100 million per yr., must be made of steel, sizes no. 4 to no. 10, lengths of one half to two and one half in. Exclusive distributorship desired for all of Canada. Mr. Peter Browne, O. Browne & Co. Ltd. (I, D), 110 Elmslie St., La Salle, Montreal 650, Quebec.

Metal stampings

34615 — FRANCE — Kitchen utensils; stamped and pressed metal. Creasy A. (I, A, D), 19, Rue Du Colonel Moll, Paris 17.

Fabricated wire products

34800 — BELGIUM — Bird cages, all types in metal. Handelsvennootschap Europe P.V.B.A. (I, Wholesaler), Acacialaan 8, Westmalle. Contact Mr. Van Beusekom, Mng. Ptr.

Fabricated metal products

34990 — SWITZERLAND — Small, mass produced, low priced metal novelties, gadgets, labor saving devices, pop articles, electronic novelties, suitable for mail order business. Drogissa Versand AG (I, mail order house), Alte Landstrasse 55, CH-8802 Kilchberg.

Engines, turbines

35191 — FRANCE — Hydraulic engines (2 & 3 cubic centimeters, 210 bars) to operate a circular saw (250 to 300 mm diameter, 7,000 to 8,000 RHM), pneumatic engines for same purpose. Union Technique, 16 Rue Dayde, 31200 Toulouse.

Farm machinery

●35200 — INDONESIA — Equipment required for Seed Farm Project consisting of: (A) Silo block for storage of

6,400 tons of seed rice; (B) Annex to silo, building of 44x21 m. divided into receiving hall, warehouse, and laboratory; (C) Tenders shall be for entire work as a turnkey project. Contact: Perusahaan Umum Sang Hyang Seri Liaison Office, Jalan Teuku Umar 19, Jakarta, Indonesia. Bid No. IDA-003/SFP/1973 with deadline May 5.

Construction, mining, materials handling machinery, equipment

35314 — BELGIUM — Second hand heavy duty hydraulic cranes in different power ranges of the type: galion, grove or pettibone. (To be operated by one person). Kranen Michielsens, P.V.B.A. (I, M), Tweemontstraat 100-102 Deurne 2100.

35314 — FRANCE — Power shovels, cranes, draglines. ECOBEM (I, Wholesaler), 7 Bis Rue Merimee, 75116 Paris. WTDR 1/73.

35314 — FRANCE — Truck-mounted power cranes; fork-lift truck attachments, grapples, buckets, presses, shovels, forks. Ets. Rene Foglia S.A. (D, M), 148 Chemin De La Madrague Ville, 13345 Marseille Cedex 5. WTDR 1/73.

35314 — PORTUGAL — Second-hand power crane 130-160 tons lifting capacity. Construtora Moderna, S.A.R.L. (M), Estrada Nacional 10, Amora.

35314 — TAIWAN — 3 units of moving crane of 15 tons with spare parts; 3 units of transportation crane of capacity of 3 tons; 2 units of electric cranes on rail with capacity of 5 tons. Frank & Co. (I), P.O. Box 55-112, Taipei.

35317 — FRANCE — Loaders. ECOBEM (I, Wholesaler), 7 Bis Rue Merimee, 75116 Paris. WTDR 1/73.

35318 — PARAGUAY — All terrain, small to medium size, gasoline or diesel motor truck, amphibious, capable to cross 7 ft. deep water courses, to be used as utility vehicle for rural electrification work. Catalogs, descriptive materials, and f.o.b. US port quotations requested. Requests literature, prices. Andi-Administracion Nacional De Electricidad (D), Ing. Zoilo Rodas Rodas, Gerencia Tecnica, Andi, Calle Padre Cardozo 560, Asuncion.

35320 — COLOMBIA — Mining machinery, equipment, particularly for the exploitation of bauxite, other aluminum ores. Capacity should be for a daily minimum production of 40 tons. Mr. Guillermo Alvarez-Diago, Pres., Cooperativa Bauxiteros Jamundi. (Cooperativa Association), Jamundi (Valle).

35324 — FRANCE — Rotary drills. ECOBEM (I, Wholesaler), 7 Bis Rue Merimee, 75116 Paris. WTDR 1/73.

35331 — FRANCE — Tricone bits for rotary drills. ECOBEM (I, Wholesaler), 7 Bis Rue Merimee, 75116 Paris. WTDR 1/73.

35331 — TAIWAN — 7 units of elevators of 3 tons, spare parts. Frank & Co. (I), P.O. Box 55-112, Taipei.

35340 — TAIWAN — 4 units of electric elevators of 1 ton, spare parts. Frank & Co. (I), P.O. Box 55-112, Taipei.

●35360 — KENYA — One electric overhead traveling crane, 5 ton capacity to comply with British standards 466, 1960, with one ton capacity electromagnetic attachment. Application for documents must be received by April 16.

Special Action

Each of the following trade notices is deemed to rate the special attention of American manufacturers and suppliers by the U.S. Commercial Officers overseas.

28210 — YUGOSLAVIA — Equipment and know-how for production annually 15-20,000 tons of phthalic anhydride from orthoxylene. Requests literature. IPLAS (I, M), Krpanova 2, 66001 Koper.

34441 — SWEDEN — Aluminum siding. Fasadfinans AB, Attn: Mr. V. Freivalds (I), Box 115, S-576 00 Savsjo.

35521 — SWEDEN — Machine for electrostatic flock-printing on shirts, sweaters and fabrics. Requests replies as soon as possible; machine urgently needed. Schoolline AB (I, A, D), Tegnergatan 35, S-111 61 Stockholm.

37321 — ITALY — Small one-man submarines for shallow water exploration, fish location, or recreation, powered by electric or Schnorkel combustion engine. Firm may be approached by Telex 27536 — Rodevica — Genoa, Attn: Alberto De Vita. Fratelli De Vita— Costruzioni Meccaniche Di Alberto De Vita E Fratelli S.N.C. (I, D, M), Via Del Pontasso, 16015 Casella, Genova. WTDR 1/73.

Contact: Overseas Purchasing Division, East African Railways Corp., 4 Millbank, London, S.W. 1, England.

35370 — FRANCE — Industrial powered trucks, tractors; hand trucks, trailers including dollies, platform trucks, pallets. Manutan (I, M), 33 Ave. Philippe-Auguste, 75011 Paris.

35370 — TURKEY — Diesel fork lift trucks: lifting capacity 5000 KGS at 600 mm load centers. Alarko Sanayi Ve Ticaret A.S. (Engineering firm), Necatibey Caddesi 84, Karakoy, Istanbul. WTDR 4/70. Unit as well as total f.o.b. prices should be quoted in the proformas to be submitted. Catalogs, technical data should be included in the proposals. Proforma prices should include cost of necessary components. Delivery periods, gross, net weights of the items quoted should be shown.

Metalworking machinery

35410 — FRANCE — Machine-tools: presses, planing-milling machines, jig boring machines, drilling machines, grinding machines, parallel & front operated lathes. Colmant Wemex S.A. (I, D), Rue Ambroise Croizat, Z.I. 95100 Argenteuil. WTDR 1/73.

35410 — GERMANY — Machine tools, metal cutting types; novelties not sold in Germany. Muenchmeyer, Petersen & Co. (I, A, D), 2 Hamburg 11, Roedingsmarkt 29, Attn: Mr. Wolf.

35410 — TURKEY — (a) circular sawing machine: max. cutting capacity on rounds 120mm.; (b) electrohydraulic highest duty hacksawing machine: saw blade dimensions 700 x 55 x 2.5mm.; (c) radial drilling machine: max. distance column face to spindle 2500 or alternative 3000mm, drilling from solid in 60 kgm/sq in steel 0 100mm feed 0.35 - 0.4mm/rev., swivelling table (manually operated): 1000x700 approximate surface area 1000x700; (d) hydraulic deburring, buffing and polishing machine for internal and external surfaces of cylindrical objects max. 3500mm diameter and 2500mm length; (e) hydraulic deburring, buffing and polishing machine handling parabolas interior bottom surfaces of containers from 500mm up to 3500mm diameter; (f) pillar type drilling machine: drilling capacity in steel 60 kgm/sq mm 0 50mm, drilling depth 250mm (g) tool grinding machines: one set 0.5 hp 2800rpm, one set 1 hp 2800 rpm, one set 4 hp 1500 rpm (h) universal center lathe: swing over bed 800mm, turning length: between centers 1000mm, with normal equipment and necessary instrument; (i) hydraulic heavy duty spinning machine: tank ends in aluminum, sheet steel, copper and stainless steel up to 3300mm diameter, silo funnels, fume hoods and large containers and flanged and profiled parts for construction of vessels and tanks. Max sheet thickness st 37.2 6mm; (j) two universal center lathes: swing over bed 500mm, turning length between center 1500mm, with normal equipment and necessary instrument; (k) universal milling machine: table dimensions 400x1600, vertical and oblique milling head, universal milling head, standard and electrical equipment; (l) universal plate cutting a working machine; (m) double column planing machine: max planing width and height 1200x1200mm, planing lengths 3000mm; (n) shaping machine: stroke 700mm; (o) pillar type drilling machine: drilling capacity in steel 60kgm/sq mm 050mm, drilling depth 250mm; (p) horizontal floor type boring mills: diameter of boring spindle 125mm, diameter of milling spindle 200mm, vertical travel of headstock 1000mm, cross travel of column 4000mm, axial spindle travel 900mm, rotary and sliding table surface 1500x1500 longitudinal traverse of table 1000mm; (q) universal center lathe: swing: overhead 500mm, turning length between centers 1500mm, with normal equipment and necessary instruments; (r) gear honing machine: technical specification-model 16, gear diameter 1600mm, gear height 900mm, with recommended equipment; (s) portable gas cutting machine: with track for straight line cuts, circle cutting device, floating head device equipped with adaptor for fitting plasma torch and oxy-acetylene burner for cutting up to 150mm thickness; (t) plasma cutting and welding machine: with necessary instruments, cutting thickness for stainless steel max 50mm (u) lame cutting machine, 3 portal type, for plates 2500 x 6000mm. Alarko Sanayi ve Ticaret A.S. (Engineering firm engaged in design and erection of industrial installations on turnkey basis and manufacturing and assembly of components thereof), Necatibey Caddesi 84, Karakoy, Istanbul. All machines should include motors with 200/380 volt operating on 50 cycles. Unit as well as total f.o.b. prices and cost of needed components should be quoted in proformas to be submitted. Catalogs, technical data should be included. If cooling is imperative, air-cooling preferred. Delivery periods, gross and net weights of items quoted should be shown. Design of machinery on metric system preferred. Prices, credit terms will be major factors.

35412 — SWEDEN — Drilling machines. Maskinaktiebolaget AKMA (I, D), Box 138, S-381 01 Kalmar. WTDR 1/73.

35418 — JAPAN — Numerical control machine tools capable of cutting and other necessary machining for manufacture of plain bearings of different dimensions by replacing memorized taps or cards. Catalogs, descriptive materials requested. Oiles Industry Co., Ltd. (M), Yamaguchi Bldg., 1-1 Shinbashi 2-Chome, Minato-ku, Tokyo 100.

35420 — GERMANY — Machine tools, metal forming types; novelties not sold in Germany. Muenchmeyer, Petersen & Co. (I, A, D), 2 Hamburg 11, Roedingsmarkt 29, Attn: Mr. Wolf.

35440 — GERMANY — Special dies & tools, die sets, jigs & fixtures; not sold in Germany. Muenchmeyer, Petersen & Co. (I, A, D), 2 Hamburg 11, Roedingsmarkt 29, Attn: Mr. Wolf.

35452 — SWEDEN — Precision measuring tools. Maskinaktiebolaget AKMA (I, D), Box 138, S-381 01 Kalmar. WTDR 1/73.

35485 — AUSTRALIA — Wire coat (garmet) hanger producing machine. The Retarded Children's Welfare Assoc. of Tasmania, Walkabout Workshops For Handicapped People, J. Siggers, Mgr. (M), 56, Clydesdale Ave., Clenorchy, Tasmania, 7010.

Special industry machinery

●**35500 — ALGERIA** — Turnkey Plant at Setif to extrude and mold agricultural use plastic cups or tubes: pliable ones of impact polystyrene for reforestation purposes, removable-bottom ones of high-density polyethylene for orchards, and impact polystyrene truncated cones for flowers. Production to be 2150 m/t polystyrene and 50 m/t polyethylene products annually, but with installed capacity to total 4000 m/t. Tender "Unite de Production de Godets en Matieres Plastiques; bid deadline May 2. M. Le Chef du Projet Plastiques, Sonatrach, 17 Rue de la Liberte, Algiers, Telex 91790, Cable Address Sonatra. Correspondence in French required. Tender documents in French at 1000 DA (approx. $229.89) from the above address. A review copy of the specifications available in French on a short term loan basis to firms domiciled in the U.S. from Transportation and Capital Equipment Division, BCABP-464, U.S. Dept. of Commerce, Washington, D.C., 20230 ★(202-967-5593).

35522 — GERMANY — Parts, attachments to knitting machines, excluding needles. Peter Gilles KG, Contact: Herr Gilles (I, A), 4 Duesseldorf-Oberkassel, Siegfried Str. 16.

35531 — GERMANY — Woodworking machinery, tools, equipment. Maschinen-Kaul, Heinrich Kaul & Sohn, Contact: Herr Wolfgang (I, A, D), 4 Dusseldorf, 369 Koelner Strasse. WTDR in prep.

35531 — GERMANY — Woodworking machinery, tools, equipment. Maschinen-Kaul, Heinrich Kaul & Sohn, Contact: Herr Wolfgang (I, A, D, R), 4 Dusseldorf, 369 Koelner Strasse.

35595 — GERMANY — Machinery, equipment, instruments and accessories for production and setting of contact lenses. C.i.f., delivery against invoice. Optik Wilhelm P. Soehnges, contact: Herr Haberzetti (D, I, A), D-8000 Muenchen 2, Postfach 20 22 07. WTDR 2/73.

35595 — JAPAN — Advanced equipment, or system, for manufacturing machine parts and components of high tension and accurate dimensions from metal powder by sintering or new processes, if any. Descriptive materials, catalogs requested. Oiles Industry Co., Ltd. (M), Yamaguchi Bldg., 1-1 Shinbashi 2-Chome, Minato-ku, Tokyo 100.

35595 — TURKEY — Brick making machinery to produce 20 million 190cm x 190cm x 85cm sized bricks per year. Baking and drying should be by tunnel kiln method. Requests literature, prices. Sesa Muhendislik Ve Musavirlik A.S. Cumhuriyet Caddesi 21, Taksim, Istanbul.

General industrial machinery

35671 — AUSTRALIA — Industrial electric furnace requiring 500 KVA single phase power. Ferrovanadium Corp. NL (Minerals processing), Hector J. Ward, Chairman, Law Chambers, Cathedral Sq., Perth, Western Australia, 6000.

35690 — COLOMBIA — Fire fighting apparatus for about 30 firemen. Alcalde. Municipio de Fusagasuga (Municipal Govt.), Apartado Nacional 129, Fusagasuga (Cundinamarca).

35690 — GERMANY — General industrial machinery, other wrapping, packaging machinery, such as bundling, banding, unit packaging, tablet wadding. Muenchmeyer, Petersen & Co. (I, A, D), 2 Hamburg 11, Roedingsmarkt 29, Attn: Mr. Wolf.

Service industry machinery

35811 — BELGIUM — Coin operated merchandise vending machines; self-service food distribution, equipment. Eurodi & Co., European Distribution Co., SPRL (A, I, D), Surdent 1, 4801 Stemberg, Province of Liege.

35892 — GERMANY — Stoves, cooking, for commercial purposes, ceramic. Rehahn KG (I, D), P.O. Box 6, 6079 Buchschlag.

Electric transmission, distribution equipment

3612193 — FRANCE — Stabilized power supplies. Eurotron (I, M, A, D), 7, Ave. du General Leclerc, 94600 Choisy Le Roi.

Electrical industrial apparatus

36220 — FRANCE — Automatic coin operated system for parking lots. Replies in French. ERO — Automatisme (I, D, R, M), 111, La Canebiere, 13001 Marseille.

36220 — GERMANY — Servo-controls and control units for construction of switch cabinets; terms of delivery: C.i.f. (incoterms) Hamburg; terms of payment: 30 days no. Direct purchase & agency. Eberle & Co. GmbH, Contact: Herr Dieter Bauer. (M, A, D), D-85 Nuernberg; Oedenbergerstrasse 55/65. WTDR 2/73.

36231 — TURKEY — (A) portable arc welding generator, maximum admissible welding current: manual welding with 40% duty cycle 400 amps, 36 volt; (B) portable diesel welding generator, maximum admissible welding current: manual welding with 40% duty cycle 350 amps; 32 volt, motor power: 25 hp at 3000 rpm; (C) wig (tig) welding machine: with necessary instruments for stainless steel carbon steel aluminum and copper alloys. Maximum admissible welding current: manual welding with 60% 360 amps, 24 volt torch type, air-cooled; (D) automatic welding machine supports, with automatic welding head: usually used for submerged arc welding with single electrode and which can easily be adapted for other welding processes by changing some of its components other welding processes such as: twin electrode submerged arc welding; strip cladding; gas metal-arc welding, with control boxes calibrated in meters/hour 0-1500 amp. o.c; (E) mig/mag welding machines: max welding currents at 60% duty cycle 500 amp. Type of cooling: air for steel wires diameters are 0.8 to 1.6mm max torch rating 500 A. cables length 5-6m. Alarko Sanayi ve Ticaret A.S. (Engineering firm engaged in design, erection of industrial installations on turnkey basis and manufacturing and assembly of components thereof), Necatibey Baddesi 84, Karakoy, Istanbul. All machines should include motors with 220/380 volt operating on 50 cycles. Unit as well as total f.o.b. prices should be quoted in proformas to be submitted. Catalogs, technical data should be included in proposals. Proforma prices should include cost of necessary components. If cooling is imperative, air-cooling preferred. Delivery periods, gross and net weights of items quoted should be shown. Designing of machinery on metric system will be preferred. Prices, credit terms will be major factors in evaluation.

Household appliances

36311 — BURUNDI — Electric household ranges, ovens. Correspondence in French if possible. Electra, Mr. Efstratios Haidemenos (I, R), B.P. 564, Bujumbura. Appliances must be 220 volt, 50 cycle, triple phase. F.o.b. prices and catalogs requested. Goods should be very securely packed, banded against damage.

36311 — GERMANY — Stoves and ranges, microwave, for household. Rehahn KG (I, D), P.O. Box 6, 6079 Buschschlag.

36320 — BURUNDI — Household refrigerators and home freezers. Correspondence in French. Requests literature, prices. Electra, Mr. Efstratios Haidemenos (I, R), B.P. 564, Bujumbura. Appliances must be 220 volt, 50 cycle, triple phase, importer not interested in 110 volt equipment.

36331 — BURUNDI — Household mechanical washing machines and driers. Correspondence in French. Electra, Mr. Efstratios Haidemenos (I, R), B.P. 564, Bujumbura. Appliances must be 220 volt, 50 cycle, triple phase, importer not interested in 110 volt equipment. Goods should be securely packed and banded against damage.

36340 — BURUNDI — Electric fans, electric razors and other small electric household appliances, including but not limited to deep fat friers, hot plates, toasters, waffle-irons, electric irons, blenders, other food preparation appliances, electric toothbrushes. Correspondence in French. Electra, Mr. Efstratios Haidemenos (I, D, R), B.P. 564, Bujumbura. Appliances must be 220 volt, 50 cycle, triple phase, importer not interested in 110 volt equipment.

36350 — BURUNDI — Household vacuum cleaners. Correspondence in French.

Electra, Mr. Efstratios Haidemenos (I, R), B.P. 564, Bujumbura. Appliances must be 220 volt, 50 cycle, triple phase, importer not interested in 110 volt equipment. Goods should be securely packed and banded.

36393 — BELGIUM — Food waste disposal units, commercial. Eurodi & Co., European Distribution Co., SPRL. (A, I, D), Surdent 1, 4801 Stembert, Province of Liege.

Electric lighting, wiring equipment

36421 — SWITZERLAND — Electric table lamps, metal, decorative, residential type, modern style, antique reproduction, lamp brackets. Prefers East Coast suppliers. Tapeten Spoerri AG, Attn.: Mr. P. Strauss (I, R), Talacker 16, CH-8022 Zurich.

Radio, television receiving sets

36511—BURUNDI — Household, including portable/transistor type in particular and automobile radios. Correspondence in French if possible. Electra, Mr. Efstratios Haidemenos (I, A, D), B.P. 564, Bujumbura. Household radios must be 220 volt, 50 cycle, triple phase. F.o.b. prices and catalogs requested. Goods should be very securely packed, banded against damage and pilferage.

36514 — BURUNDI — Phonographs, record players (hi-fidelity/stereophonic), tape and cassette recorders, amplifiers, tuners, speaker-systems. Correspondence in French if possible. Electra, Mr. Efstratios Haidemenos (I, A, D), B.P. 564 Bujumbura. Appliances must be 220 volt, 50 cycle, triple phase. F.o.b. prices and catalogs requested. Goods should be securely packed and banded.

36520 — BURUNDI — Phonograph records, pre-recorded, blank tapes and cassettes. Correspondence in French if possible. Electra, Mr. Efstratios Haidemenos (E, D, R), B.P. 564, Bujumbura. F.o.b. prices and catalogs requested. Goods should be securely packed, banded against damage and pilferage.

36520 — IVORY COAST — L.P. records, popular music: Afro-Cuban, jazz etc. preferably f.o.b. costs not exceeding $2.20 each, in consignments of 500 to 1,000 at a time. Mr. Moudachirou Abdel Latif, "La Boite A Musique." (I, A), B.P. 6861, Abidjan.

36520 — SWEDEN — Tapes for cassette tape recorders. Handelsfirman Bengt Fredriksson (I, D), Box 303, S-401 24 Goteborg 1.

Communication equipment

●36610—ALGERIA—Supply and installation "Lincompex" type radiophone switchboard and terminal, four-circuit. Correspondence in French required. Tender No. 936/TT2/O/ST, bid deadline May 8. Tender documents in French available from Administration Generale Sous Direction du Materiel et des Marches, Bureau 234, Ministere des Postes et Telecommunications, 4, Blvd. Salah Bouakouir, Algeria. Cable address: Gentel Alger, Telex 52020.

●36610 — SINGAPORE — Supply of (A) 120 nos. cross connecting cabinet 1600-200 pairs unit type; (B) 1000 nos. cable terminal units 200 pairs type for use with (A) above. Tender No. P1/4/73, bid deadline March 30. Copies of tender documents available from General Manager, Singapore Telephone Board, Telephone House, Hill Street, Singapore 6, Singapore, or on a 5-day loan basis from Science and Electronics Division, BCABP-466, Rm 1112, U.S. Department of Commerce, Washington, D.C., 20230. ★(202-967-4822).

●36620 — GREECE — Supply of radioteleprinting communication (ship-to-shore) automatic error-correcting equipment. Tender No. 8965, bid deadline March 29. Tender documents available free from Hellenic Telecommunications Organization (OTW), 6 Klissovis St., Athens, Greece or from the Science and Electronics Division, BCABP-466, Rm. 1112, U.S. Department of Commerce, Washington, D.C., 20230 ★(202-967-4822).

Electronic components, accessories

36794 — FRANCE — Metallized polyester coils, 63 V & 100 V, in various dimensions. Societe Precis, Attn: Jacques Tardy (I, M), 8, Boulevard De Menilmontant, 75020 Paris.

36795 — SWEDEN — Temperature sensitive reed switches, range: plus 50 to 150 degrees centigrade. ASEA, Attn: I. Stockel (I, M), Kopparbergsvagen 2, S-721 83 Vasteras.

36795 — UNITED KINGDOM — Coated glass substrates: borosilicate or soda lime flat glass plate, coated with a thin film of either tin oxide or indium oxide. Combination should be reasonably optically transparent, and with low surface resistance. Preferred size — 1 foot square or larger, and 1.5mm thickness. G E C Hirst Research Center (Research laboratories of major U.K. electronics manufacturer), Wembley, Middlesex. Initial requirement of approximately 100 sq. ft. by research unit could lead to follow-on purchases by manufacturing divisions. Contact Mr. F. L. Mulchrone, Purchasing Mgr.

Motor vehicles, equipment

37113 — COLOMBIA — One fire truck with complete accessories; fire fighting equipment. Minimum capacity: 1,000 gal.; aerial platform, air brakes, gasoline engine, "Ford" chassis preferably, or equal. Alcalde, Municipiode Fusagasuga (Municipal Govt.), Apartado Nacional 129, Fusagasuga (Cundinamarca).

Aircraft, parts

37212 — JAPAN — Used light airplanes for amusement park rides. Seiwa Trading Co., Ltd. (I, Exporter), 23, 1-Chome Takaba-cho, Nakamura-ku, Nagoya. WTDR 12/72.

Ship building, repairing

37321 — GERMANY — Motorboats. R. Schmittter. Contact: Mr. Rolf Schmitter (I, A), 5161 Dueren-Guerzenich, Aachener Landstr. 46.

37323 — GERMANY — Sailboats. R. Schmitter (Contact: Mr. Rolf Schmitter). (I, A), 5161 Dueren-Guerzenich, Aachener Landstr. 46.

Engineering, laboratory, scientific, research instruments

●38110 — BOLIVIA — Supply of seismographic services including dinosesis, vibroseis, geoflex or other system. Tender No. 149-72, bid deadline, April 23. Specifications available from the Yacimientos Petroliferos Fiscales Bolivianos (YPFB), Casilla 401, La Paz, Bolivia. Cable address: Yacibol, or on a 5-day loan basis from the Science and Electronics Division, BCABP-466, Rm 1128, U.S. Department of Commerce, Washington, D.C., 20230 (202-967-2939).

Instruments for measurement, analysis and control

38213 — BELGIUM — Hygrostats (Humidistat). ACEC — Ateliers de Constructions Electriques de Charleroi S.A. (M, I, exporter), 1620 Drogenbos.

38213 — TURKEY — Material testing equipment: inspection of sheet metal, welding seams — ultrasonic testing equipment, extensonetary photoelasticity, absolute dilatonetry, creep, fatigue, etc., testing equipment, macrograph of girth weld in pressure vessel walls and destructive and non distructive etc., testing equipment for pressure vessels. Alarko Sanayi Ve Ticaret A.S. (Engineering firm), Necatibey Caddesi 84, Karakoy, Istanbul. WTDR 4/70. Unit as well as total f.o.b. prices should be quoted in the proformas to be submitted. Catalogs, technical data should be included in the proposals. Proforma prices should include cost of necessary components. Delivery periods, gross, net weights of the items quoted should be shown. Designing of machinery on the metric system preferred.

Opticcl instruments, lenses

38312 — BELGIUM — Infared rifle scope. ARMAF — Manufacture D'Armes A Feu (M, I, D), 21 Rue Du Pont, 4180 Hamoir S/Ourthe.

Surgical, medical, dental instruments

38421 — ITALY — Gamma ray or other radiation equipment to sterilize daily about one million empty pharmaceutical vials (total weight 3.8 to 4 metric tons) already packed in sealed cartons for shipment to pharmaceutical manufacturers. Cartons have average dimensions of 18.5 x 9.5 x 3.5 ins. Firm seeks safe, economical equipment which satisfies U.S. FDA standards. Send literature, specifications, f.o.b. prices. Pirear S.P.A., Attn: Rag. Lorenzo Fredi (M. Exporter), Via Casilina 125, 00176 Rome. Telex ERGON-61368.

Ophthalmic goods

38512 — AUSTRIA — Contact lenses. Specs. & price list requested. Exclusive rights for Austria. Gustav Tatschl, Medizin-Technik (I, A, D), Langgasse 16, A-4020 Linz. WTDR 11/72.

Photographic equipment

38611 — SWITZERLAND — Novelty type still cameras, exposure meters, slide projectors, suitable for mail order business. Drogissa Versand AG. (I, mail order house), Alte Landstr. 55, CH-8802 Kilchberg.

Watches, clocks, parts

38711 — BURUNDI — Electric clocks. Correspondence in French. Electra, Mr. Efstratios Haidemenos (I, D, R), B.P. 564, Bujumbura. Appliances must be 220 volt, 50 cycle, triple phase, importer not interested in 110 volt equipment. Goods should be securely packed and banded against damage and pilferage.

38711 — PAKISTAN — Portable watchmens clock. Muhammad Akmal, Director. (I), Science Museum, West Pakistan University of Engineering and Technology, Lahore 31. University intends purchase immediately 35 watchmen clocks.

Toys, amusement, sporting goods

39490 — BELGIUM — Gymnasium equipment. Direct purchase & agency. Durox Belgium S.A. (M, I, A), Ave. Jean De Bologne, 22, 1020 Brussels. WTDR 12/72.

39493 — CANADA — Ski equipment, summer sporting goods, including tennis, camping equipment such as back packing equipment, tents, bikes, training shoes. Reid & Pattee Sporting Goods Ltd. (D, M, R), 1291 Wellington St., Ottawa, Ontario K1Y 3A8. WTDR in prep.

39493 — BELGIUM — Playground equipment. Direct purchase & agency. Durox Belgium S.A. (M, I, A), Ave. Jean De Bologne, 22, 1020 Brussels. WTDR 12/72.

39493 — SWITZERLAND — Sporting goods, scuba equipment, home training physical fitness equipment, exercising equipment, winter sports equipment, novelties, gadgets, suitable for mail order business. Drogissa Versand AG. (I, mail order house), Alte Landstrasse 55, CH-8802 Kilchberg.

Costume jewelry, novelties

39610 — SWITZERLAND — Costume jewelry, novelties, watch bracelets, imitation pearls, necklaces, plastic, leather costume jewelry, suitable for mail order. Drogissa Versand AG. (I, mail order house), Alte Landstr. 55, CH-8802 Kilchberg.

Manufacturing industries

39912 — FRANCE — Paint brushes & paint rollers. Flament, S.A. (M, D), 174, Ave. du General-de-Gaulle, 02260 La Capelle. WTDR 4/72.

39960 — ITALY — Floor coverings in PVC. F. Citterio (I, D), Via Casoretto 36, 20131 Milan.

39962 — BELGIUM — Floor covering, asphalt-felt base and supported plastic. Direct purchase & agency. Duroc Belgium S.A. (M, I, A), Ave. Jean De Bologne, 22, 1020 Brussels. WTDR 12/72.

39999 — SWEDEN — Cigarette lighters. Handelsfirman Bengt Fredriksson (I, D), Box 303, S-401 24 Goteborg 1.

39999 — SWITZERLAND — Wigs, switches, toupees, hair curlers, tobacco pipes, cigarette holders, lighters, gadgets, gifts, decorative articles, pop articles, suitable for mail order business. Drogissa Versand AG. (I, mail order house), Alte Landstrasse 55, CH-8802 Kilchberg.

Antique, secondhand stores

59330 — LEBANON — General line of military, civilian secondhand clothing for men, women. Firm hopes to complete purchase arrangements in 30 days. Vartkes Naccachian (I, A, D), Bourj Hammoud, Dora, P.O. Box 80208, Beirut.

Mail Order Symposium Planned For Switzerland, May 2-4

The fifth International Direct Marketing and Mail Order Symposium will take place May 2-4 in Lucerne, Switzerland. Companies and individuals interested in participating or obtaining additional information should write to the Conference Secretariat. Forchstrasse 84, P.O. Box 214, CH-8032 Zurich.

Agencies

Specific foreign firms have expressed interest in agency agreements for the products listed below. Exclusive agencies for these products are wanted only if specified.

Canning, preserving foods

20331 — SWEDEN — Canned fruits. Saljbolaget (I, A), Box 605, S-130 10 Ektorp. WTDR 1/73.

20332 — SWEDEN — Canned white beans. Ekstroms Livsmedels Produkter AB (I, A, M), Fack, S-701 01 Orebro.

20334 — SWEDEN — Orange juice. Ekstroms Livsmedels Produkter AB (I, A, M), Fack, S-701 01 Orebro.

20338 — SWEDEN — Marmalade, orange. Saljbolaget (I, A), Box 605, S-130 10 Ektorp. WTDR 1/73.

20341 — SWEDEN — Dried fruits. Ekstroms Livsmedels Produkter AB (I, A, M), Fack, S-701 01 Orebro.

20354 — SWEDEN — Salad dressing. Saljbolaget (I, A), Box 605, S-130 10 Ektorp. WTDR 1/73.

Food preparations

20992 — AUSTRIA — Canned snack items (Potato sticks, bacon rinds, french-fried onion rings, cheese snacks, etc.). Requests prices, samples. Peter Kachel. (I, A, D), Wurlitzergasse 9, A-1160 Vienna.

Broad woven fabric mills, cotton

22112 — BELGIUM — Sheeting, bed, carded percale, muslin; 42 inch. Flandre & Fils. (A, I, D), Ave. Dossin de St-Georges 44, 1050-Brussels.

22115 — BELGIUM — Sheeting, fine cotton, combed. Flandre & Fils. (A, I, D), Ave. Dossin de St. Georges, 44, 1050-Brussels.

22117 — GERMANY — Finished cotton broad-woven fabrics, printed or dyed, for outer garments. Hans-Guenter Lattreuter (A), 28 Bremen, Bismarckstr. 137. WTDR 2/73.

22119 — BELGIUM — Towels, cotton, including dishcloths. Flandre & Fils. (A, I, D), Ave. Dossin de St. Georges, 44, 1050-Brussels.

Broad woven fabric mills, manmade fiber, silk

22218 — GERMANY — Fabrics, silk and manmade fibers, the latter either blended with cotton or purely of synthetic fibers, for outer garments, printed or dyed. Hans-Guenter Lattreuter (A), 28 Bremen, Bismarckstrasse 137. WTDR 2/73.

Broad woven fabric mills, wool

22313 — GERMANY — Finished wool apparel fabrics, for use in women's, men's, boys' clothing. Hans-Guenter Lattreuter (A), 28 Bremen, Bismarckstr. 137. WTDR 2/73.

Narrow fabrics, other smallwares mills

22411 — AUSTRALIA — Woven labels. Arbon Embroidery (I, A, D), 72-74 Hope St., West Brunswick, Victoria 3056. 1/73.

22414 — SWEDEN — Insulation tape, electric. C. A. Clase AB (I, A), Ostra Hamngatan 52, S-411 09 Goteborg. WTDR 10/72.

Knitting mills, products

22511 — SWITZERLAND — Body stockings for women, misses, made of yarns and mixtures. Perosa AG (I, D, M), Rosengartenstr. 1, P.O. Box, Ch-9007 St. Gallen. WTDR 3/72.

22523 — SWITZERLAND — Exclusive hosiery novelties for misses, children, including anklets, athletic and knee length socks. Perosa AG (I, D, M), Rosengartenstr. 1, P.O.B., Ch-9007 St Gallen. WTDR 3/72.

22560 — GERMANY — Knit fabrics for women's, men's, boys' outerwear. Hans-Guenter Lattreuter (A), 28 Bremen, Bismarckstr. 137. WTDR 2/73.

Textile goods

22952 — THAILAND — Artificial leather, 36" or 54" width. Packed in roll. Requests c.i.f. Bangkok prices, samples. Fuk Siang Long Chong Kee Ltd., Part. (I, D), 391-3 Srithamatirach Rd., Bangkok. WTDR 10/72. Manufacturer or supplier of "Nappel Sevilla" artificial leather, or equal.

Men's youths', boys' suits, coats, overcoats

23114 — BELGIUM — Sports coats, jackets, tailored, boy's. Diasport SPRL (M, I), 42 Rue Jean Dambre, 1600 Sint Pieters-Leeuw.

Men's, youths', boys furnishings, work clothing

23212 — BELGIUM — Sports shirts, knit outerwear, men's, youth's, boy's. Diasport SPRL (M, I), 42 Rue Jean Dambre, 1600 Sint-Pieters-Leeuw.

Women's, misses', juniors' outerwear

23312 — BELGIUM — Tennis shirts, women's, misses', juniors'. Diasport SPRL (M, I), 42 Rue Jean Dambre, 1600 Sint-Pieters-Leeuw.

Apparel, accessories

23811 — SWITZERLAND — Ski gloves, mittens, leather-and-fabric combination, other sport gloves including mountain climbers gloves. Wollgarn Aktien Gesellschaft (I, D), Hardtrumstrasse 127, CH-8037 Zurich. WTDR 4/72.

Sawmills, planing mills

24212 — ITALY — Douglas fir lumber Oregon, Washington states production, pitchpine flitches North Carolina production. Franco Mangani (A), 23 Via S. Felice A Ema 50125 Firenze.

Industrial chemicals

28190 — SWITZERLAND — Specialty inorganic chemicals for pulp, paper, rubber, plastics, lacquer, paint, textile, chemical industries. Adolf Schmids Erben, Attn: H. Leuzinger (A, D, M), Effingerstrasse 17, 3001 Bern.

Drugs

28340 — VENEZUELA — Small labora-

tory, interested in joint venture with U.S. firms for purpose of manufacturing pharmaceutical products, or to act as distributor for same products. Correspondence requested in Spanish. Laboratorios Spefar Venezolanos, S.A. (M), Apartado 327, Caracas. Attn: Milton Loayza, Asst. Mgr.

Soap, detergents, cleaning preparations, perfumes, cosmetics

28430 — SWITZERLAND — Surfactants, finishing, chemical specialties for textile, paper, pulp, metalworking, plastics, plastic processing industries; softeners and specialty chemicals preventing pollution of water and air in industrial plants and anti-corrosion products. Adolf Schmids Erben, Attn: H. Leuzinger (A, D, M), Effingerstrasse 17, 3001 Bern. May consider manufacture or processing under license in Switzerland.

Chemical products

28930 — ISRAEL — Printing inks for newspapers, black/color in paste form. Elind Ltd. Electronic & Industrial Engineering Co. (M), 24 Dela Rina St., P.O. Box 13075, Tel Aviv.

28993 — SWEDEN — Heat shield material. C. A. Clase AB (I, A), Ostranjlkni Hamngat—411 09 Goteborg. WTDR 10/72.

28993 — SWITZERLAND — Chemical preparations for textile, construction, paint, plastics, metalworking, pulp and hardening materials; insulation products; metal-treating compounds of non oil bases; water treating compounds; waterproofing compounds, other industrial specialties incl. fluxes, plastic preparations. Adolf Schmids Erben, Attn: H. Leuzinger (A, D, M), Effingerstrasse 17, 3001 Bern. May consider manufacture or processing under license in Switzerland.

Petroleum refining

29117 — KOREA — Automobile engine oils, greases. F.o.b. quotations for various specs. with samples for use in sales promotion. Nam Buk Motors Co. (A, D), I.P.O. Box 3713, Seoul 100.

Paving, roofing materials

29510 — SWITZERLAND — Paving, roofing mixtures for building trade, specialties only, for industrial plants, large areas, parking lots, etc. Adolf Schmids Erben, Attn: H. Leuzinger (A, D, M), Effingerstrasse 17, 3001 Bern. May consider manufacture or processing under license in Switzerland.

Fabricated rubber products

30693 — BELGIUM — Balls, rubber except inflatable. Diasport SPRL (M, I), 42 Rue Jean Dambre, 1600 Sint-Pieters-Leeuw.

Plastic products

30795 — SWITZERLAND — Nylon, plastic, teflon bearings for industrial application. Kellenberg & Co. AG (I, A, D), Signaustr. 9, Ch-8032 Zurich.

Footwear, except rubber

31417 — BELGIUM — Sport shoes. Diasport SPRL (M, I), 42 Rue Jean Dambre, 1600 Sint-Pieters-Leeuw.

31417 — SWITZERLAND — Ski boots, tennis shoes. Wollgarn Aktien Gesellschaft (I, D), Hardtrumstr. 127, Ch-8037 Zurich. WTDR 4/72.

Special Action

Each of the following agency opportunities is deemed to rate the special attention of American manufacturers and suppliers by the U.S. Commercial Officers overseas.

28180 — SWITZERLAND — Specialty industrial organic chemicals for paper, pulp, plastics, textile, chemical, rubber, paint processing industries. Adolph Schmids Erben AG Attn: H. Leuzinger (A, D, M), Effingerstrasse 17, 3001 Bern.

28210 — SWITZERLAND — Plastics materials and resins, for plastics processing industries; anti-corrosion specialties; water and air pollution control plastics for industry. Adolf Schmids Erben, Attn: H. Leuzinger (A, D, M), Effingerstrasse 17, 3001 Bern.

28510 — SWITZERLAND — Raw materials for paint and lacquer industry; advanced anti-corrosion surface preparations, building trade products. Adolf Schmids Erben AG, Attn: H. Leuzinger (A, D, M), Effingerstr. 17, 3001 Bern.

29110 — ITALY — Petroleum coke with low sulphur content. Telex 27680—Cocler Genova. Henry Coe e Clerici S.P.A. (I, A, D, ship agents-ship owners), Via Martin Piaggio 17/8, 16122 Genoa. Firm is largest Italian coal importer (over 2 million tons per yr); interested in importing petroleum coke on exclusive basis or exclusive agency for Italy.

35410 — FRANCE — Sophisticated large size machine tools for aerospace industry; cuttings & finishing machines with numerical control, milling machines, tracers. Halbronn Freres S.A. (I, A), 17 Rue Francois De Neufchateau, 88 Epinal. WTD 7/72.

35593 — SWITZERLAND — Advanced plastics working machinery and equipment, compression, injection, molding; extrusion machines, parts, accesories, control systems for plastics machinery. Thickness gauges, measuring instruments for plastic foil processing industry. Equipment for pretreatment of plastic foils. Adolf Schmids Erben, Attn: H. Leuzinger (A, D, M), Effingerstrasse 17, 3001 Bern.

Abrasive, asbestos, nonmetallic mineral products

32912 — ITALY — Grinding wheels. SIX S.A.S. (M, D, A), Via San Quintino 23, 10121 Torino. WTDR 1/72.

32932 — SWITZERLAND — Axle-shaft, spindle gaskets, o-rings, front end gaskets for pumps, fabric gaskets in millimeter measures, all materials. Kellenberg & Co. AG (I, A, D), Signaustr. 9, Ch-8032 Zurich.

Steel mill products

33167 — JAMAICA — Permanent steel forms for concrete floors. Quotations c.i.f. Kingston, general literature of types produced is requested. CMP Structures Ltd., Attn: J. R. Williams (I, Construction of steel bldgs), 53 Molynes Rd., Kingston 10. WTDR 10/72.

Rolling, drawing, extruding of nonferrous metals

33578 — BELGIUM — Cable, power. Est. Jacquet, Ateliers de Bobinage (M, A, R), 41 Ave. Golenvaux (Pont de France) Namur.

Cutlery, hand tools, general hardware

34291 — GERMANY — Marine hardware. R. Schmitter. Contact: Mr. Rolf Schmitter (I, A), 5161 Dueren-Guerzenich, Aachener Landstr. 46.

Heating apparatus, plumbing fixtures

34335 — JAMAICA — Steam power boilers. Smaller units such as used in laundry, dry cleaning, food processing, other light industrial establishments. Quotations c.i.f. Kingston. Thermal & Industrial Services Ltd. Attn: Ashley B. Beckford (I, D), 11A New Lincoln Rd., Kingston 5. WTDR 2/73.

34336 — AUSTRALIA — Gas heating and cooling appliances for domestic applications. Southern Heating Industries Co. (A, D, M), 129 Herald St., Cheltenham, Victoria 3192. WTDR 1/73.

34336 — BELGIUM — Incinerators, household waste. Embassy of United States of America, Attn: Commercial Officer, T.O. 118, 27 Blvd. du Regent, Brussels.

34336 — JAMAICA — Incinerators, domestic, commercial, industrial types, parts. Quotations c.i.f. Kingston. Thermal & Industrial Services Ltd. Attn: Ashley B. Beckford. (I, D), 11A New Lincoln Rd., Kingston 5. WTDR 2/73.

Metal stampings

34610 — FRANCE — Enameled ware (household). Emailleries des Flandres, S.A. (I, M), 9, Rue d'Hem, 59390 Lys Les Lannoy.

Farm machinery

35227 — ITALY — Lawn mowers of all types. MAIAC (I, D, R), Corso Marconi 4, 10125 Torino. WTDR 12/72.

Construction, mining, materials handling machinery, equipment

35340 — GERMANY — Automobile lifts for service stations, garage type. (A). Interested companies should write to: American Consulate General, 7 Urbanstr., D-7000 Stuttgart 1, c/o Mr. David C. Lacey, Jr.

35350 — UNITED KINGDOM — All forms of conveying equipment such as powered belt or roller conveyors, overhead chain conveyors, bulk handling conveyors, chain, slat or pallet. Speedflow Handling Services. Attn: Roland Brown (D), 77 Hanworth Rd., Warwick.

35370 — FRANCE — Industrial powered trucks and tractors; trucks and trailers including dollies, platform trucks and pallets. Agemat Sarl (I, D), B.P. 36, 62220 Carvin.

Metalworking machinery

35424 — ITALY — Safety devices for metalforming presses. SIX SAS (M, D, A), Via San Quintino 23, 10121 Torino. WTDR 1/72.

35452 — AUSTRALIA — Logic comparators. Ampec Engineering Co. (I), P.O. Box 18, Strathfield, N.S.W., 2135. WTDR 6/72.

35452 — ITALY — Inspection, quality control equipment for precision mechanics. SIX S.A.S. (M, D, A), Via San Quintino 23, 10121 Torino. WTDR 1/72.

35480 — ITALY — Semi automatic equipment for tube to sheet welding, MAG, MIG, TIG, or any other process. Arcosider S.A.S. di Dr. Rodolfo Botisk & Co. (I, A), Via Melchiorre Gioia 70, 20125 Milano.

Special industry machinery

35521 — GERMANY — Knitting machines. Peter Gilles KG, Contact: Herr Gilles (I, A), 4 Duesseldorf-Oberkassel, Siegfriedstr. 16.

35521 — GERMANY — Textile-industries machinery, knitting machines, fibre-to-fabric machinery, fabric machinery, power looms, all types, including cotton, synthetic broad looms. Ernst Peter Juettner KG, Textilmaschinen und Industriebedarf Contact: Herr Hepfer (A, I), 4 Dusseldorf, Schweidnitzer Str. 39/40. WTDR 5/72.

35540 — SWITZERLAND — Advanced paperboard working machinery for the manufacture of cardboard packagings of all kinds. Fankhauser & Co. AG (A), Steinenbackweg 22, 4710 Balsthal. WTDR in prep.

35540 — SWITZERLAND — Paper and paperboard coating machinery. Fankhauser & Co. AG (A), Steinenbackweg 22, 4710 Balsthal. WTDR in prep.

35591 — CANADA — Evaporators and dryers for chemical processing industry. Finnan Engineered Products Limited — Contact: J. C. Finnan (D, M), 1149 Bellamy Rd., North, Unit 22, Scarborough, Ontario M1H 1H7.

General industrial machinery

35623 — SWITZERLAND — Mounted ball, roller, needle bearings, precision bearings, and self lubricating bearings, for electrical equipment, machine tools, textile machinery, and household appliances. Kellenberg & Co. AG (I, A, D), Signaustr. 9, Ch-8032 Zurich.

35641 — ISRAEL — Blowers, industrial, standard sizes. Elind Ltd., Electronic & Industrial Engineering Co. (M), 24 Dela Rina St., P.O. Box 13075, Tel Aviv.

35642 — ISRAEL — Air purification and dust collection equipment to include air washers, fans, blowers, filters, scrubbers and mechanical collectors for industrial gas cleaning. Elind Ltd-Electronic & Industrial Engineering Co. (M), 24 Dela Rina St., P.O. Box 13075, Tel Aviv.

35662 — ITALY — Alternating current motor speed drives, inverters. SIX S.A.S. (M, D, A), Via San Quintino 23, 10121 Torino. WTDR 1/72.

35690 — CANADA — Filters for chemical processing industry. Finnan Engineered Products Ltd. — Contact: J. C. Finnan. (D, M), 1149 Bellamy Rd., North, Unit 22, Scarborough, Ontario M1H 1H7.

35690 — GERMANY — Labeling and marketing machines, except for food, tobacco, liquor, beer, wine, dairy products. Ernst Peter Juettner KG, Textilmaschinen Und Industriebedarf, Contact: Herr Hepfer (A, I), 4 Duesseldorf, Schweidnitzerstr. 39/40. WTDR 5/72.

35690 — SWEDEN — Label printing machinery. Atlas System AB Attn: Mr. Hiller, Dir. (I, A), Box 262, S-131 02 Nacka 2.

35690 — SWITZERLAND — Novel packaging machinery and packaging sheets, especially for cardboard packaging. Fankhauser & Co. AG (A), Steinenbackweg 22, 4710 Balsthal.

Office, computing, accounting machines

35741 — AUSTRALIA — Desk calculators, including low cost pocket types and programmable. Ampec Engineering Co. (I), P.O. Box 18, Strathfield, N.S.W. 2135. WTDR 6/72.

35741 — NIGERIA — Electronic calculators, pocket-size, operated by disposable or rechargeable batteries. D. A. Joannides, General Mgr., Leventis Technical Ltd., (I, A, D), Iddo House, P.O. Box 159, Lagos. WTDR 8/72.

Service industry machinery

35800 — GERMANY — Equipment & accessories for operation of gasoline service stations; automobile repair shops; automotive maintenance service; garage equipment; car washing installations; corrosion preventatives. The American Consulate General, 7 Urbanstrasse, D-700 Stuttgart, c/o Mr. David C. Lacey, Jr.

35892 — SWITZERLAND — Equipment and systems for prevention, elimination and removal of air and water pollution in industry. Adolf Schmids Erben, Attn: Mr. H. Leuzinger (A, D, M), Effingerstr. 17, 3001 Bern.

Machinery

35992 — SWITZERLAND — Metallic, semimetallic, ceramic packing. Kellenberg & Co. AG (I, A, D), Signaustr. 9, Ch-8032 Zurich.

Electric transmission, distribution equipment

36110 — AUSTRALIA — Operational amplifiers, both integrated circuits and discrete components. Ampec Engineering Co. (I), P.O. Box 18, Strathfield, N.S.W., 2135. WTDR 6/72.

36112 — AUSTRALIA — Oscillators — audion and R.F.; cathode ray oscilloscopes including portable and OEM panel mounting types; integrated circuit tester; logic trouble shooting kits; integrated circuit bases; lasers, both CO2 and crystal types. Ampec Engineering Co. (I), P.O. Box 18, Strathfield, N.S.W., 2135. WTDR 6/72.

36113 — AUSTRALIA — Four terminal low resistance ohmmeters; digital counters; integrated circuits CMOS type; energy measuring equipment for lasers; smoke samplers for pollution measurement; dissolved oxygen measurement. Ampec Engineering Co. (I), P.O. Box 18, Strathfield, N.S.W., 2135. WTDR 6/72.

36113 — SWEDEN — Industrial measuring instruments. Allmanna Automatik AB (I, A, M), Box 352, S-121 03 Johanneshov.

36121 — AUSTRALIA — Radio transformers. Ampec Engineering Co. (I), P.O. Box 18, Strathfield, N.S.W., 2135. WTDR 6/72.

36131 — GERMANY — Switchgear and magnetic switches. Fraba Fabrik Elektrischer Apparate GmbH, Attn: Herr W. Wasserhess (M), 5 Koeln 60, 35 Bremerhavener Strasse, Postfach 620120.

36133 — BELGIUM — Switches, 750 volts & under. ETS. Jacquet, Ateliers de Bobinage (M, A, R), 41 Ave. Golenvaux (Pont de France), Namur.

Electrical industrial apparatus

36211 — AUSTRALIA — Function generators, wide frequency range and down to 0.0002 hz. Ampec Engineering Co. (I), P.O. Box 18, Strathfield, N.S.W., 2135. WTDR 6/72.

36212 — BELGIUM — Motors, electrical, up to 100 HP. Ets. Jacquet, Ateliers de Bobinage (M, A, R), 41 Ave. Golenvaux (Pont de France) Namur.

36212 — SWEDEN — Small direct current motors with and without toothed transmission gear. Allmanna Automatik AB (I, A, M), Box 352, S-121 03 Johanneshov.

36220 — AUSTRALIA — Process and control instrumentation. F. R. Mayfield Pty. Ltd. (A, D, M), 11 Halifax St., Adelaide, South Australia 5000. WTDR 1/73.

36220 — BELGIUM — Starters, contactors for squirrel cage, wound rotor, synchronous motors, over 600 volts. Ets. Jacquet, Ateliers de Bobinage (M, A, R), 41 Ave. Golenvaux (Pont de France), Namur.

36220 — GERMANY — Relays, electric control devices, electronic counting equipment. Fraba Fabrik Elektrischer Apparate GmbH, Attn: Herr W. Wasserhess. (M), 5 Koeln 60, 35 Bremerhavener Strasse, Postfach 620120.

36220 — ITALY — Control equipment for automatic loading of steel mill, foundry furnaces. SIX S.A.S. (M, D, A), Via San Quintino 23, 1021 Torino. WTDR 1/72.

36220 — UNITED KINGDOM — Eddy current coupling drives (motor speed controller) as used in textile industry. Similar to Dynamatic Corp's "Adjusto-Spede", or equal. Parmeko Ltd. (M, I, D), Percy Rd., Aylestone Park, Leicester LE2 8FT. Contact Mr. M. Simpson, Mng. Dir.

36230 — ITALY — Semi automatic equipment for tube to sheet welding, MAG, MIG, TIG or any other process. Arcosider S.A.S. di Dr. Rodolfo Botisk & Co. (I, A), Via Melchiorre Gioia 70, 20125 Milano.

Electric lighting, wiring equipment

36430 — BELGIUM — Switches, electric, except automobiles. Ets. Jacquet, Ateliers de Bobinage (M, A, R), 41 Ave. Golenvaux, (Pont de France), Namur.

36430 — FRANCE — Hyper frequency coaxial connectors. Societe Generim, Attn: Pierre Bordaix (A, D), 143, Blvd. Pereire, 75017 Paris.

36430 — GERMANY — Pneumatic contacts. Fraba Fabrik Elektrischer Apparate GmbH, Contact: W. Wasserhess (M), 5 Koeln 60, 35 Bremerhavener Str., Postfach 620120.

Radio, television receiving sets

36520 — SWEDEN — Phonograph records, tapes, cassettes. Saljbolaget (I, A), Box 605, S-130 10 Ektorp. WTDR 1/73.

Communications equipment

36611 — TAIWAN — Telephone switchboard. Yung Tay Trading Co., Ltd. (I, A), 169, Sec. 2, Nanking East Rd., Taipei.

36612 — TAIWAN — Telephone and telegraph (wire) apparatus, equipment and components. Yung Tay Trading Co., Ltd. (I, A), 169, Sec. 2, Nanking East Rd., Taipei.

36620 — AUSTRALIA — Military communications systems and items; military mobility equipment. Robinson, Holt & Assoc. (A), 60 The Esplanade, Brighton, Victoria 3186. WTDR 1/73.

36622 — UNITED KINGDOM — Plastic cassettes for home video tape recorders. Bowthorpe Holdings Ltd. (M, I, D), Gatwick Rd., Crawley, Sussex. Agency agreement would lead to consideration of manufacture under license. Contact J. Bowthorpe, Mng. Dir.

36623 — FRANCE — Burglar alarm systems. Ero-Automatique (M, A, D), 111 La Canebiere, 13001 Marseille.

36623 — GERMANY — Traffic signals, street, electric; industrial gateway and parking lot control systems. Mr. David C. Lacey, Jr., Commercial Officer, c/o American Consulate General, 7 Urbanstr., D-7000 Stuttgart 1. WTDR 10/72.

36623 — GERMANY — Electronic burglar alarm systems. Rippel Electronic KG (A, D, I), 70 Trierer Strasse, 6601 Heusweiler. WTDR 10/72.

36623 — GERMANY — Traffic signals, street, electric; industrial gateway and parking lot control systems. Mr. David C. Lacey, Jr., Commercial Officer, c/o American Consulate General, 7 Urbanstrasse, D-7000 Stuttgart 1.

36625 — UNITED KINGDOM — Low cost microwave or IR electronic surveillance system for use in retail stores. Parmeko Ltd. (M, I, D), Percy Rd., Aylestone Park, Leicester LE2 8 FT. Contact Mr. M. Simpson, Mng. Dir.

36626 — FRANCE — Audio-visual slide sound systems; language laboratories, including audio-visual equipment, teaching equipment, including TV, perforated analyzers with result printing device. Sintra. (I, A), 26, Rue Malakoff, 92600 Asnieres.

36626 — UNITED KINGDOM — Ultrasonic plastic welding equipment used on production line for thermoplastic moldings, power range 150 to 1000 watts. IDM Electronics Ltd. (M, I, D), Arkwright Rd., Reading, Berkshire. Successful sales would lead to early proposal for manufacture in U.K. under license. Contact: Mr. N. Weber-Brown.

Electronic components, accessories

36740 — AUSTRALIA — Wire wrap D.I.L. sockets; wire wrap high density circuit boards; D.I.L. socket boards & systems; D.I.L. sockets. Ampec Engineering Co. (I), P.O. Box 28, Strathfield, N.S.W. 2135. WTDR. 6/72.

36740 — ISRAEL — Integrated microcircuits, digital/linear; transistors; diodes; other semiconductor devices. Elind Ltd-Electronic & Industrial Engineering Co. (M), 24 Dela Rina St.; P.O. Box 13075 Tel Aviv.

36741 — FRANCE — Integrated micro circuits. Semel S.A., Attn: Roger Bourdaix (A, D), 33 rue Maurice Berteaux, 78780 Maurecourt.

Special Action

Each of the following agency opportunities is deemed to rate the special attention of American manufacturers and suppliers by the U.S. Commercial Officers overseas.

35690—BE' GIUM—Filter systems. H.V.H. Controls (Attn: Mr. Kools), (A, D), 496D Chaussee de Waterloo, 1060 Brussels.

35741 — NETHERLANDS — Electronic calculators. Catalogs, descriptive materials requested. Hacomac B.V. (I, D), Schiedamsedijk 68A. Rotterdam, Attn: Mr. F. P. van Hoorn.

35850—BELGIUM — New lines in heating & refrigeration equipment. H.V.H. Control (Attn: Mr. Kools), (A, D), 496D Chausee de Waterloo, 1060 Brusels.

35892—BELGIUM—Filter systems for swimming pools. H.V.H. Controls (Attn: Mr. Kools), (A, D), 496D Chaussee de Waterloo, 1060 Brussels.

35892 — UNITED KINGDOM — Water sterilizing plant such as ultra violet sterilizers, selective iron electrodes and automatic Ph control systems. Chlorination Equipment Ltd. (Attn: J. E. Chesney, Marketing Mgr.), (M), Cannon Lane, Tonbridge, Kent.

36220—BELGIUM — Control and control accessories. H.V.H. Control (Attn: Mr. Kools), (A, D), 496D Chaussee de Waterloo, 1060 Brussels.

38210—BELGIUM — New lines of mechanical measuring & control devices pertaining to heating & refrigeration equipment. H.V.H. Controls, Attn: Mr. Kools, (A, D), 496D Chaussee de Waterloo, 1060 Brussels.

36743 — AUSTRALIA — Light emitting diodes. Ampec Engineering Co. (I), P.O. Box 18, Strathfield, N.S.W. 2135, WTDR 6/72.

36743 — FRANCE — All types of diodes. Semel S.A. (A, D), 33, Rue Maurice Berteaux, 78780 Maurecourt.

36749 — UNITED KINGDOM — Liquid crystal displays for electronic applications. Aladdin Components. (M, I, D), Aladdin Bldg., Western Ave., Greenford, Middx. UB6 8UJ. Contact: Mr. D. C. Blythe, Dir.

36790 — AUSTRALIA — Seven segment L.E.D. displays. Ampec Engineering Co. (I), P.O. Box 18, Strathfield, N.S.W. 2135. WTDR 6/72.

36792 — FRANCE — Electronic capacitors: ceramic capacitors, ceramic chips, tantalum chips. Societe Precis — Attn: Jaques Tardy (I, M), 8, Blvd. de Menilmontant, 75020 Paris.

36793 — FRANCE — Electronic precision wire-wound resistors. Societe Precis, Attn: Jacques Tardy (I, M), 8 Boulevard De Menilmontant, Paris.

36793 — FRANCE — All types of resistors for electronic applications. Semel S.A. (A, D), 33 Rue Maurice Berteaux, 78780 Maurecourt.

36795 — FRANCE — Specialized electronic hardware: electronic components, clips. Kol Arnould Electro Industrie (I, M, A), 62 Bis, Ave. Garbiel-Peri, 93-St-Ouen.

36795 — FRANCE — Printed circuit boards ready for component insertion. Arnould Electro Industrie (I, M, A), 62 Bis, Ave., Garbiel Peri, 93-St-Ouen. Attn: Daniel Darmois.

36795 — UNITED KINGDOM — Mercury wetted relays for electronic applications. Aladdin Components. (M, I, D), Aladdin Bldg., Western Ave., Greenford, Middx. UB6 8UJ. Contact: Mr. D. C. Blythe, Dir.

36795 — UNITED KINGDOM — Radio interference filters for suppression of RF noise — used in wide variety of applications from computers to washing machines. Taylor Bros. (Oldham) Ltd. (I, D, R), Bisley Street Works, Lee St., Oldham, Lancashire.

Electrical machinery, equipment, supplies

36930 — LEBANON — Electrocardiographs, electromyiographs, and electroencephalographs. Albert Margossian (I, A, D, R, M), Furn El-Chubbak, P.O. Box 100, Beirut.

Ship building, repairing

37321 — GERMANY — Motorboats, length: up to 23 ft. Gebr. Salomon (Contact: Mr. Salomon) (I, D, A), 51 Aachen, Kongress-Str. 2.

37321 — GERMANY — Motorboats. R. Schmitter. Contact: Mr. Rolf Schmitter (I, A), 5161 Dueren-Guerzenich, Aachener Landstr. 46.

37323 — GERMANY — Sailboats. R. Schmitter (Contact: Rolf Schmitter). (I, A), 5161 Dueren-Guerzenich, Aachener Landstr. 46.

Engineering, laboratory, scientific, research instruments

38111 — UNITED KINGDOM — Sophisticated mechanical/pneumatic control or pressurization systems for aircraft. The Hymatic Engineering Co. Ltd. (M, I, D), Glover St., Redditch, Worcestershire.

38112 — FRANCE — Chemical laboratory instruments, all kinds. Labo-Service (I, D), 159 Bis, Quai Valmy, 75010 Paris.

38112 — UNITED KINGDOM — Noise level monitor for environmental, industrial use. T.E.M. Sales Ltd., Attn: Paul Bastock, Sales Mgr. (A, I, D), Gatwick Rd., Crawley, Sussex.

3811264 — FRANCE — Instrumentation for nuclear industry and research. Societe Cerme. Attn: Michel Hascoet (A, M, I), 22, Rue de La Fontaine Henri IV, 92230 Haville.

Instruments for measurement, analysis and control

38210 — FRANCE — Accelerometers. S.I.E.I. (I, D), 152 Av. des Champs-Elysees, 75008 Paris. WTDR 5/72.

38210 — UNITED KINGDOM — Water instrumentation and control systems for treatment of water and fluids. Chlorination Equipment Ltd., Attn: J. E. Chesney, Mktg. Mgr. (M), Cannon Lane, Tonbridge, Kent. Can offer extensive resources; has wide contacts throughout water treatment industry.

38213 — FRANCE — Data capture sys-

tems for metallurgical process control. Societe Cerme. Attn: Michel Hascoet (A, M, I), 22, Rue de La Fontaine Henri IV, 92230 Chaville.

38213 — UNITED KINGDOM — Industrial instrument for measurement (by radiation or thermocouple) display and control of temperature. Martron Assoc. Ltd. (I, A, D), 81 Station Rd., Marlow, Buckinghamshire.

38213 — UNITED KINGDOM — Low level (2 ppm & less) carbon monoxide monitor. T.E.M. Sales Ltd., Attn: Paul Bastock, Sales Mgr. (A, I, D), Gatwick Rd., Crawley, Sussex.

38216 — AUSTRALIA — Ph meters. AMPEC Engineering Co. (I), P.O. Box 18, Strathfield, N.S.W. 2135. WTDR 6/72.

38216 — FRANCE — Stress, strain, & flaw detecting & measuring equipment. S.I.E.I. (I, D), 152 Ave. Des Champs-Elysees, 75008 Paris. 5/72.

38216 — SPAIN — Air and water pollution detection and control instruments and equipment. Onuba, S.A. (A, D), Prim 5, Madrid 4.

Surgical, medical, dental instruments

38410 — AUSTRALIA — Dialysis filters and kidney machines which can be operated in patient's home, or alternatively in hospitals. Naha Product Australia Pty Ltd. (I, D, M), 171 Fitzroy St., St. Kilda, Victoria 3182. WTDR 1/73.

38410 — ITALY — Advanced surgical and electromedical apparatus instruments and supplies including monitoring and electronic equipment. Casa Di Cura San Paolo, Attn: Dr. Pietro Barozzi (private hospital), Corso Pescriera 180, 10139 Turin. Exclusive agency for Italy required.

38410 — LEBANON — General line of surgical and medical instruments. Albert Margossian (I, A, D, R, M), Furn El-Chubbak, P.O. Box 100, Beirut.

38421 — ITALY — Sterilization autoclaves. Casa di Cura San Paolo. Attn: Dr. Pietro Barozzi (private hospital), Corso Peschiera 180, 10139 Turin. Exclusive agency for Italy required.

Ophthalmic goods

38510 — GREECE — Photo-coagulating equipment for ophthalmic use. Requests brochures, prices as soon as possible. Nicos Ath. Papapostolou (I, A), 34 Pringipos Nicolaou St., Thessaloniki.

Toys, amusement, sporting goods

39410 — FRANCE — Games for children and adults, gadgets. Mondial Labo (I, D), 9, Bd Edgar Quinet Paris 14.

39491 — AUSTRALIA — Solid and hollow fiber glass fishing rods. I.M.I. Australia Ltd. (I, A, D), 148 Lonsdale St., Melbourne, Victoria 3000. WTDR 2/73.

39493 — BELGIUM — Nets, badminton, basketball, tennis. Diasport SPRL (M, I), 42 Rue Jean Dambre, 1600 Sint Pieters Leeuw.

39493 — SWITZERLAND — Snow skis, safety ski bindings, novelty skiing equipment, water skis, tennis balls, rackets, mountain climbers equipment. Wollgarn Aktien Gesellschaft (I, D), Hardtrumstr. 127, Ch-8037 Zurich. WTDR 4/72.

Future Construction Abroad

INDIA—The Ministry of Petroleum and Chemicals proposes to establish **10 to 12 additional fertilizer plants** during the Fifth Five Year Plan (IFY 1974-79). They will be based on fuel oil and each will have a production capacity of 900 m.t. of ammonia per day. Total planned investment is estimated at $2 billion. While the proposals envisage full utilization of available indigenous resources, implementation of the plans will entail foreign exchange expenditure of about $800 million for the import of equipment, machinery, raw materials and technical know-how not yet developed locally. Senior Indian Government officials say that procurement sources will largely depend on the financing which can be arranged. Interested U.S. firms may communicate directly with N. K. Sreenivasan, Joint Secretary, Ministr yof Petroleum and Chemicals, Shastri Bhavan, Dr. Rajindera Prasad Rd., New Delhi-1.

BRAZIL — The Companhia Siderurgica Mannesmann in Belo Horizonte, Minas Gerais is planning to invest about $12 million annually during the next five years in **expansion and renewal of its facilities**, with about 40 percent of this amount in imported equipment. Mannesmann's principal products are tool steels, special steels for mechanical construction, other high quality steels, seamless pipes and tubular products. Mannesmann is 72 percent German-owned but would welcome visits and offers from U.S. firms. Major purchases contemplated are: blooming mill; special pipe rolling mill (Assel); furnaces, probably bought from Brazilian suppliers; reducing mill, either imported or built in Brazil from foreign drawings. Contacts should be made with: Dr. Gerd Van Cuyck, Director, Companhia Siderurgica Mannesmann, Caixa Postal 2153, Belo Horizonte, Minas Gerais, Brazil (Tel: Belo Horizonte 33-0411). Dr. Cuyck stated that he plans to apply for an Eximbank preliminary commitment.

LEBANON — Construction should commence by September on a **24-floor urban center**, consisting of a 21-floor tower for 300 furnished apartments and a three-floor podium for three cinemas, restaurant, swimming pool, health club, shopping center and 3000 sq. meters of office space. To be located on Corniche Mazraa between Continental and International Hotels, Beirut, U.S. suppliers interested in offering equipment or materials for this project should contact Samir Khairallah, architect, Al Maskan Bldg., Blvd. Mazraa, Beirut (Tel: 300865). Mr. Khairallah is particularly interested in U.S. offers for 300 kitchenette units (refrigerators, ranges, sinks). He is also designing a 26-floor luxury apartment house to be built near Beirut's Carlton Hotel. U.S. suppliers of "gadgets" for expensive apartment buildings (intercoms, built-in music systems, and similar items) are invited to contact him. Contractors have not yet been selected for either project.

CANADA—Construction of a **$30 million retail-office complex** is expected to commence in Vancouver on March 5, and should be completed in 2½ years. The main feature of this complex will be a 24-floor office tower topped by a revolving restaurant. A Simpson Sears Department Store will occupy 250,000 sq. ft. of the block-long redevelopment to be known as Vancouver Square. Interested U.S. suppliers are welcome to bid on supplies and equipment needed for a project of this nature. All inquiries should be addressed to: H. Kalke, Vancouver Square Holdings Ltd., 1650 Alberni St., Vancouver, B.C.

THAILAND—The International Atomic Energy Organization (LAEO) has approved the construction of a **$135 million nuclear power plant.** The related weather station has already been completed, and an investigation for micrometeorology is now being conducted. The nuclear power plant will be a light water reactor type with a capacity of 600 megawatts. The earlier feasibility study will be updated by a supplementary feasibility study to be completed by mid-1973. Thereafter, the Electricity Generating Authority of Thailand (EGAT) will submit a request to the Government for approval to implement the project. Tender specifications may be ready by the middle of 1974. Foreign international tenders will be called. For additional information interested U.S. firms are urged to write directly to: Kasem Chatikavanij, General Manager of Electricity Generating Authority of Thailand, Bangkluey, Rama-6 Bridge, Bangkok.

JAMAICA—Frank Hall Homes Ltd. has completed plans for the construction of **331 three-bedroom units** at Meadowbrook, one of Kingston's suburbs at an estimated cost of $10 million. Construction is expected to begin in February, with completion set for early 1974. Each housing unit will consist of three bedrooms, two bathrooms, living/dining room, porch, carport, laundry and maid's facilities. U.S. companies have the opportunity of supplying plumbing fixtures, bothrom and sanitaryware, lighting fixtures and hardware to connect the scheme to an existing sewerage disposal system. Developers—Frank Hall Homes Ltd., 5 Laws St., Kingston (Tel: 922-6650). Architects & Contractors—Astram Jamaica Ltd., Ensom City, Spanish Town P.O., Jamaica, Attn: Dan Vaxham.

JAPAN—The Ministry of Construction recently announced a five year home construction plan under which a total of 9.3 million housing units will be built, of which approximately 20 percent will be prefabricated houses. The Japanese housing industry, and major general trading companies, have shown great interest in wooden and prefab houses utilizing the 2 x 4 housing system, which has not hitherto been used in Japan. The Japan Homebuilder's Assoc. has identified the following items that will be required: wallboard application tools (for handling, measuring, cutting), metal fabrication tools (power saw and saw blades, stud and runner shears, metal lock fasteners, welding guns), joint treatment tools (mining equipment, furnishing tools, sling psychometer) and wallboard lamination tools (adhesive nails-on equipment, joint compound spreaders, and related items). Certain materials such as architectural hardware, sealing and caulking material,

plumbing fixtures flooring materials and panel systems will also be required.

U.S. firms interested in direct investment or licensing may write to the following: Eidai Co., Ltd., 9-8 Uchi-Kanda, 3-chome, Chiyoda-ku, Tokyo; Napuko Homes Co., Ltd., 5, Yotsuya, 3-chome, Shinjuku-ku, Tokyo; Nitto Koei Co., Ltd., 2, Yotsuya 3-chome, Shinjuku-ku, Tokyo; Nihon Homes Co., Ltd., 3-7, Ginza, 8-chome, Chuo-ku, Tokyo; Sakamaki Shoten Co., Ltd., 12-7 Kiba, 3-chome, Koto-ku, Tokyo; Dantani Sangyo Co., Ltd., 7-2 Shinbashi 4-chome, Minato-ku, Tokyo; Hitachi Mokuzai Jisho Co., Ltd., 4-6, Saiwai-cho 3-chome, Hitachi-City, Ibaragi, Prefecture; or Toyodo Kensetsu Co., Ltd., 6. Minami-Horiedori 1-chome, Nishi-ku, Osaka.

Those interested in direct sales should write to: Chori Co., Ltd., 9, 2-chome, Horidome-cho, Nihonbashi, Chuo-ku, Tokyo; Toyo Menka Kaisha Ltd., 1-3 Otemachi 1-chome, Chivoda-ku, Tokyo; Itoman & Co., Ltd., 46, Honcho 4-chome, Higashi-ku- Osaka: Mitsui & Co, Ltd., 2-9 Nishi-Shinbashi 1-chome, Minato-ku, Tokyo: Sumitomo Shoji Kaisha Ltd., 2-2 Hitotsubashi 1-chome, Chiyoda-ku, Tokyo; or Ataka & Co., Ltd., 14, Imabashi 5-chome, Higashi-ku, Osaka.

LIBERIA — The Liberian American Swedish Minerals Co. (LAMCO), Mechlin St., P.O. Box 69, Monrovia, will **purchase new capital equipment** worth $6.5 million during 1973 to handle production from a new mine. Part of the additional equipment will be a crusher to be built in Buchanan. Presumably the $6.5 million is in addition to the $7 million LAMCO has already committed to bring the Tokadeh deposit on stream. In addition to the crusher, the new equipment may also include magnetic separators.

ARGENTINA — Domestic production of crude steel cannot meet the local demand for rolled products, and there are very good opportunities for the **sale of ingot, slabs, billets wire rod, ferroalloys, and other semi-finished products.** Domestic production of iron ore is very low, and even when Sierra Grande goes on stream to produce 2 million m.t. of pellets annually there will be shortfall of from 60% to 70% in iron ore and pellet requirements for local industry. In addition, and although per capita generation of scrap is increasing, scrap supplies are slowly declining while mill consumption is increasing. Therefore, there should be an increasingly attractive market for iron ore pellets and scrap. A summary of company activities and their plans is available from U S. Department of Commerce, Trade Opportunities Section, BIC-267, Rm 4813, Washington, D.C. 20230.

IRAN—Under orders from the Shah, the Ministry of Cooperatives and Rural Affairs is encouraging private firms to establish **small automated bakeries** with a daily capacity of two to four tons. Unofficial statistics indicate that only a few of the 3 500 bakeries in Iran are automated. Delegations from several European countries, reportedly are studying the marketing possibilities offered by this project. A British firm is said to have shipped a sample machine, with no cost or obligation, to the Baker's Guild of Tehran. This machine is intended to produce Iranian type "Barbari bread," but is of very large scale. The Ministry stresses that it would welcome information about suitable U.S. equipment.

CANADA—Toronto's City Council approved the huge **C$250 million Eaton Center redevelopment project for the Toronto city core** on Nov. 23. The first phase of the new development will include a new Eaton department store, two office towers, two parking garages and a three-level pedestrian shopping mall. Razing of existing buildings is scheduled for this spring, and this phase is expected to be completed early in 1976. The second part of the first phase will commence when the new department store is completed, and is expected to take until 1978. It will expand the shopping mall, provide a third office tower and a rooftop parking garage. Fairview Corp., developers of the Center, have set no date for beginning the second phase, but are committed to start within 13 years. According to Kenneth Bream, Fairview vice president, tentative plans provide for three office towers and three high-rise apartments with low-rise professional buildings on the remaining ground. Interested U.S. firms may address inquiries to: F. E. Barrie, Vice President, Construction, Fairview Corp., 33rd Fl., Toronto-Dominion Centre, Toronto, Ontario.

JAMAICA — Jamaica's expanding population and tourist trade are resulting in overcrowded beaches with a consequent gain in popularity for swimming pools. Also construction in Jamaica of condominiums, hotels, apartment buildings, and private residences can benefit U S. suppliers of **swimming pool equipment and chemicals.** Although the market has been growing, it is not possible to arrive at a specific valuation for imports of swimming pool equipment and servicing chemicals. A list of firms that are already importing from foreign sources is available from the U.S. Department of Commerce, Trade Opportunities Section, BIC-267, Rm 4813, Washington, D.C. 20230. Many buyers state they are interested in new and better equipment and are also seeking additional sources of supply for competitive reasons. U.S. exporters of electric equipment should bear in mind that Jamaica operates on 50 cycle, 110/220 volts, A.C. current. Equipment for direct current is not suitable. Also Jamaican importers request quotations c.i f. Kingston.

TURKEY — A $37 million World Bank loan will provide external financing for the **Greater Istanbul Water Development and Distribution Project.** Total financing between 1972-76 is expected to be $115 million. Administrative responsibility for the project is divided between the Istanbul Waterworks Admin. (Istanbul Sulari Isletmesi-ISI), Dogan Hitit, Project Manager, Istanbul, which is primarily concerned with distribution within the city, and the State Waterworks Admin. (Devlet Su Idaresi-DSI), Istanbul, which is responsible for construction of dams and delivery to municipal pumping stations. The equipment and materials to be procured by international tender under the loan will include: ductile pipes, approximately 40,000 twenty millimeter water gauges, main network gauges for pump and reservoir outlets, pressure control instruments, large distribution pumps and accessories. Contracts to be let by DSI include water purification installations and laying of large-diameter pipe on the floor of the Bosphorus to connect the systems on the European and Asian sides. With regard to the latter, the Italian firm of Inter Consult was recently awarded the contract to provide engineering services for the project, which will involve laying two pipes 1900 meters long and 900 cm. in diameter on the floor of the Bosphorus. An international tender for construction of the project is expected to be let sometime in 1973. With regard to the purification installations, the firm Tahal of Israel is currently preparing specifications for the Omerli dam and Kagithane installations and prequalification requirements for selection of a foreign consultant. DSI is expected to select two consultants, one for project design and one for supervising installation and maintenance of water purity for a specified period following installation.

CANADA—Western International Hotels has announced that it will build and operate a **600-room hotel as part of a C$65 million commercial complex** to be developed in downtown Toronto. In addition to the hotel and an interior shopping plaza, office towers of 23 and 35 floors will be built by Oxlea Investments Ltd., Toronto-Dominion Centre, which will participate in the development. Construction of the hotel, plaza, and the 23-story office tower is expected to begin immediately. The tower is scheduled for completion in October 1974 and the hotel will open in January 1975. The 35-floor office tower will be started in two years. The two office towers will rise from a promenade area one level above the street. Outdoor eating facilities and a year-round swimming pool partly in the hotel and partly outdoors will be contained in this area. Interested U.S. suppliers should direct inquiries to: Ralph Van Noy, Vice President, Western International Hotels, c/o Olympic Hotel, Fourth and Seneca Ave., Seattle, Washington 98111, or J. C. Cornish, Project Manager, Box 130, Toronto-Dominion Centre, Toronto, Ontario. M5K 1H1.

MEXICO—Details of Hojalata y Lamina, S.A. (HYLSA), parent company of Monterrey's famous HYLSA Steel Group, expansion plans were confirmed, and include the following projects: **Construction of a new sponge iron plant** by Fierro Exponja, S.A., the HYLSA sponge iron subsidiary. The plant will cost a total of $14 million, of which $5 million will be spent on equipment imported from the U.S., and Eximbank will finance 45 percent of this amount; Construction of a new, **18-foot electric steel furnace** with a capacity of 15,000 tons per month. All bids on the project have already been received by HYLSA. Longer range planning by HYLSA calls for the installation of a series of 21-foot electric furnaces, each expected to produce 150 tons of steel per heat. Procurement of the first of these furnaces is scheduled for early 1974 and the new unit is expected to be in production in 1976. Two more 21-foot furnaces are planned for installation later in the decade, bringing HYLSA's annual ingot steel capacity in its Monterrey mill to 1.5 million tons by 1980. U.S. firms may contact Hojalata y Lamina, S.A., Avenida Cuidad de los Angeles at Ote, San Nicolas de los Garaga, N.L., P.O. Box 996, Monterrey, for more information.

YUGOSLAVIA — A Food and Agriculture Organization (FAO) mission has proposed a $29.6 million project for developing livestock and sheep raising on private farms. World Bank financing is proposed. The project would have three

major phases: A $19.2 million project to improve dairy production on 1,700 private farms in Slovenia and Croatia; For the southern republics of Serbia, Macedonia, Montenegro and Bosnia/Herzegovina, a similar project costing $9.5 million is envisaged for 1,000 private farms; and a $900,000 loan to develop sheep raising on 300 private farms in Serbia, Macedonia and Montenegro. There should be an opportunity for U.S. firms to compete on tenders for breeding livestock, milk cows, and a wide variety of specialized feeding and milking machinery.

CANADA—Approximately 30 wells will be drilled in Canada's Arctic Islands in 1973, with Panarctic Oils, Ltd., Rea Point, Melville Island, accounting for 23. The company proposes to spend approximately $65 million on exploration in the coming year, and will concentrate its activities on Ellef Ringnes and Melville Islands. To date Panarctic has found about a third of the 30 billion cu. ft. of gas which it feels will be required to support the construction of a natural gas pipeline out of the Islands.

THAILAND—The two-year negotiations for Thailand's first petrochemical complexes, involving a total investment of $160 million. are now in the final stages of negotiation. The upstream petrochemical venture, representing an investment of $72 million, is supported by Shell Oil Co., while the downstream petrochemical venture is supported by the Mitsui group of Japan. The upstream complex will produce primary petrochemical and intermediates except ethylene, which is to be imported from the Middle East. It will supply the downstream complex with the raw materials for further production of secondary products such as polymers, chloride, and detergent materials. The plants are tentatively planned for completion in 1976. The projects will create sales opportunities for machines, equipment, control instruments. and other equipment for the petrochemical plants. Write: Thai Petrochemical Co., Ltd., 14 Surisak Rd.. Bangkok, Attn: K. Y. Chow, managing director; Mitsui Chemical Industry Co., Ltd., 3rd Fl. Wangless Bldg., 297 Surawong Rd., Bangkok, Attn: Y. Takegawa, manager; The Board of Investment of Thailand, Mansion-2 Rajdamnern Rd., Bangkok, Attn: Sempora Bunyakupt.

JAMAICA—One of Jamaica's largest housing developments is being planned by Hutton's Worldwide Property (Jamaica) Ltd., at Innswood, 15 miles west of Kingston. The project will consist of 4,000 units and will include two-bedroom, three-bedroom and high-rise apartment blocks. Each unit will be made from cast prefabricated sections. The total cost of the project probably will exceed $48 million. The First National City Bank is expected to participate in the financing. Managing director of the promoting company, Mr. St. John Hutton, is shopping around for machinery to prefabricate the units. This will include heavy lifter cranes. In addition, a large sewage plant is being contemplated to serve all the proposed 4,000 units. U.S. suppliers could organize and present to the promoters a package (including financing) of these two major items. Developers—Hutton's Worldwide Property (Jamaica) Ltd., 1A Duke St., Kingston, Phone: 929-2320. Architects & Contractors to be assigned.

UNITED KINGDOM—The British Steel Corp. (BSC) has been given Government approval for a £3 billion investment and modernization program over the next decade. Half of the capital will be generated by BSC and half will come from government funds. The plan will increase steelmaking capacity from the present level of 27 million m t. to about 33 million m.t. by 1980 and concentrate bulk steelmaking at five centers: Ravenscraig in Scotland, Port Talbot and Llanwern in South Wales. Scunthorpe in Yorkshire, and the Teeside complex. There will be opportunities for foreign manufacturers to provide some of the equipment even though BSC will be operating under a "buy British" bias. British Steel Corp., 33 Grosvenor Pl., London S.W.1.

CAMEROON—The second part of the World Bank-financed Cameroon education project will build or improve eight schools in Yaounde (2), Douala (2), Garoua (2), Kumba and Nkongsamba. The $11.4 million budget also covers the cost of studies to be performed in preparing the third part of the project. Architectural designs are to be ready by the end of 1973 and a call for construction bids should be issued around February or March of 1974.

ETHIOPIA—The Imperial Board of Telecommunications of Ethiopia (IBTE) has signed a contract with Italtel S.P.A. of Milan (Siemens' Italian subsidiary) for the construction of a $2.2 million, three-way microwave link (Addis—Harar/Jimma/Shashemane). Additional physical structures and feeder roads at the relay stations, which are not included in the Italtel contract, will bring the overall project cost to $3.5 million. The project is the second phase of IBTE's current microwave system development program. The first, embracing the Addis-Asmara link, is expected to become operational in March. IBTE Deputy General Manager Gabriel Tedros announced that the Phase II links will eventually be extended out of the country, with the first segment being Shashamane-Moyale on the Kenyan border. Tenders probably will be issued in late 1974 or 1975.

CYPRUS — The Mayor of Kyrenia recently stated that the consulting engineers of the Nicosia and Famagusta Sewerage Boards have prepared a preliminary report on Kyrenia's sewerage needs. A World Bank representative informed the Kyrenia Municipal Council that a loan application which has the Government of Cyprus' guarantee would probably be approved. Cyprus' Town and Country Planning and Public Works Dept., Nicosia, is preparing reports on the basic sewerage needs of Kyrenia. These reports, expected to be completed soon, will permit the appropriate authorities to formulate specifications and invite international tenders.

POLAND—The United Nations Development Program and Food & Agriculture Organization are assisting the Government of Poland in their poultry development program and a project office has been established in Poznan. The program will involve the importation of a considerable amount of poultry production and/or processing equipment, and breeding stock. The program also envisages the establishment of a Poultry Research Institute at Poznon. U.S. firms interested should contact Ray Feltwell, UNDP/FAO Poultry Project, Academy of Agriculture, ul.Wojska Polskiego nr.28, Poznan, Poland. The following are important Government of Poland organizations involved in the poultry industry: ANIMEX, Pulawska 14, Warsaw (For marketing all types of poultry, poultry meat, shell eggs, liquid and frozen eggs); POLDROB, Hoza 66/68, Warsaw (Poultry breeders and hatcheries and the egg-and-poultry industry — POLDROB actually controls total Polish poultry and egg production); Centralne Laboratorium Przemyslu Jajezarsko-Drobiarskiego, Poznan-Janikowo, Wykopy 2/4 (One of two major research institutions for poultry and eggs —conducts all types of research involving production, processing and marketing of poultry meat and eggs). Instytut Zootechniki, Zaklad Hodowli Drobiu (Poultry Production Laboratory), Krabow, Sarego 2 (Poultry breeding research only).

TURKEY — Turkish State Railways (TCDD) Director General Ahmet Sarp is reportedly concluding an agreement with World Bank for a $47 million loan to help finance TCDD's projects for the period 1973-75. This agreement is subject to final approval by Turkey's Council of Ministers. This loan will cover railway renewal, signalization, and telecommunication projects, which will be carried out on an international tender basis. The loan will not cover the purchase or assembly of diesel locomotives.

PORTUGAL — Plans to expand the Port of Viana do Castelo, 33 miles north of Leixoes (Oporto's seaport), are in progress, but still in the preliminary study phase and no final Government decision has been made to proceed. In addition to the above, the Viana do Castelo shipyards are undergoing a complete remodeling, modernizing and expansion program. They can build hulls for ships having a maximum of 12,000 deadweight tons, but equipment for the hulls must be installed in Lisbon because of limited space in the present facilities. When the first phase of the expansion is completed, which includes the construction of a finishing dock, it will be possible to construct and finish three 16,000-ton ships per year. The second phase of the plan calls for construction of a slide-way for ships of 80,000 to 100,000 tons, a 600-meter pier at the north bank of the River Lima, and two breakwaters. This second phase is conditioned on the expansion of the port, with the work to be carried out by the Portuguese Government. Cost of the entire project is estimated at from $19 to $38 million. The expansion and modernization of the shipyards will increase the demand for items used in naval construction, specifically marine engines, radio navigation equipment, refrigeration, and fish processing and handling equipment. U.S. firms should contact Estaleiros Navais de Viana do Castelo, SARL, Av. Praia Norte, Viana do Castelo, Portugal. Cable: NAVAIS.

PERU — Dr. Carlos Mariotti, President and General Manager, Empresas Electricas Asociadas, Jiron Conde de Superunda 261. Apartado 1384, Lima, believes that the World Bank will approve a proposed $20 million loan sometime in March or April. The loan is to finance purchase of distribution system equipment such as meters and voltage regulators through international bidding.

New Publications

When ordering any publication, indicate title and series designation, if indicated, and make checks or money orders payable to the Superintendent of Documents. Orders should be sent to the U.S. Department of Commerce, Washington, D.C. 20230, or to any of its district offices.

DOMESTIC AND INTERNATIONAL BUSINESS ADMINISTRATION

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Annual subscription $28.50 ($7.25 more for foreign mailing). Single copy 30¢.

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BUREAU OF COMPETITIVE ASSESSMENT AND BUS. POLICY

U.S. industrial outlook—1973, with projections to 1980. January 1973. 476pp. $6.50.

Pulp, paper, and board. Vol. 28, No. 4, January 1973. Annual subscription $2 (50¢ for foreign mailing). Copy 50¢.

SOCIAL AND ECONOMIC STATISTICS ADMINISTRATION

BUREAU OF ECONOMIC ANALYSIS

Survey of current business. Vol. 53, No. 1. Annual subscription, includes weekly statistical supplement, $20 ($5 more for foreign mailing). Single copy $2.25.

Business conditions digest. Series ES1, No. 73-1. January 1973. Annual subscription, including supplements, $33 ($8.25 more for foreign mailing). Single copy $3.25. This monthly report brings together many of the economic time series found most useful by business analysts and forecasters.

Defense indicators. Series ES4, No. 73-1. January 1973. Annual subscription $7.50 ($2 more for foreign mailing). Single copy 75¢. The purpose of this monthly report is to bring together the principal time series on defense activity which influence short-term changes in the national economy. These include series on obligations, contracts, orders, shipments, inventories, expenditures, employment, and earnings.

BUREAU OF THE CENSUS

Agriculture

Cotton ginned, prior to February 1, by States, and ginners estimate of bales of cotton to be ginned after January 31, by States; crop of 1972 (A10: 72-12). 2pp. 10¢.

Cotton ginned, prior to January 15, by States: 1972, 1971, 1970, and 1969 (A10: 72-11). 2pp. 10¢.

Report on cotton ginnings prior to Jan. 1, 1973, for the crop of 1972, by counties (A20: 72-5). 6pp. 10¢.

Construction and Housing

Authorized construction — Washington, D.C. area: December 1972 (C41-72-12). 4pp. Annual subscription $1. Copy 10¢.

Value of new construction put in place: December 1972 (C30-72-12). 32pp. Annual subscription $5.50 includes monthly and annual supplement ($1.50 more for foreign mailing). Single copy 55¢.

Housing vacancies—part 1: vacant housing units in the United States, fourth quarter 1972 (Series H-111, 72-4). 10pp. Annual subscription, series H-111 and H-121 combined, $3.50 ($1 more for foreign mailing). Single copy 35¢.

Distribution and Services

Weekly retail sales. Estimated weekly retail sales of retail stores in the United States for week ending February 3 (CB-73-38). 2pp. 10¢.

Monthly selected services receipts: December 1972 (BS-72-12). 12pp. Annual subscription $1. Single copy 10¢.

Monthly wholesale trade—sales and inventories: December 1972 (BW-72-12). 26pp. Annual subscription $3.50 ($1 more for foreign mailing). Single copy 35¢.

Advance monthly retail sales: January 1973 (CB-73-39). 2pp. 10¢.

Weekly retail sales. Estimated weekly retail sales of retail stores in the United States for week ending February 10 (CB-73-42). 2pp. 10¢.

Foreign Trade

General imports—cotton manufactures: December 1972 (FT 130-72-12). 10pp. Annual subscription $1. Single copy 10¢.

Imports—commodity by country: November 1972 (FT 135-72-11). 226pp. Annual subscription $46 ($11.50 more for foreign mailing). Single copy $4.

Exports—commodity by country: November 1972 (FT 410-72-11). 512pp. Annual subscription $72.50 ($18.25 more for foreign mailing). Single copy $6.25.

Puerto Rico and U.S. possessions: October 1972 (FT 800-72-10). 26pp. Annual subscription $5.50 ($1.50 more for foreign mailing). Single copy 45¢.

Bunker fuels: December 1972 (FT 810-72-12). 2pp. Annual subscription $1. Single copy 10¢.

Bunker fuels: calendar year 1972 (FT 810-72-13). 2pp. 10¢.

Governments

Construction expenditure of State and local governments: October - December 1972 (GC72 No. 4). 4pp. 25¢.

Industry

Men's and women's selected monthly apparel cuttings: 1970 to 1972 (revised) (Series: MA-23A, supplement). 14pp. Free upon request from the Bureau of the Census, Washington, D.C. 20233, or any Commerce Department District Office.

Selected industrial air pollution control equipment: 1971 (Series: MA-35J(71)-1). 4pp. 25¢.

Population

Household and family characteristics: March 1972 (Series P-20, No. 246). 96pp. $2.25.

Some demographic aspects of aging in the United States (Series P-23, No. 43). 32pp. $1.

Household ownership of cars and light trucks: July 1972 (Series P-65, No. 44). 24pp. 55¢.

Federal-State Cooperative Program for Population Estimates

Estimates of the population of Indiana counties: July 1, 1971 and July 1, 1972 (Series P-26, No. 14). 4pp. 25¢.

Estimates of the population of Delaware counties: July 1, 1971 and July 1, 1972 (Series P-26, No. 15). 2pp. 10¢.

1970 Census of Population

Detailed Characteristics

California—sections 1 and 2 (PC(1)-D6). Section 1, 1090pp., section 2, 922pp. Sold as a set only, $21.

Texas—section 2 (PC(1)-D45). 720pp. Sections 1 and 2 sold as a set only, $16.50.

ECONOMIC DEVELOPMENT

ECONOMIC DEVELOPMENT ADMINISTRATION

Economic development, Vol. 10, No. 2. February 1973. Annual subscription $2 (50¢ more for foreign mailing). Single copy 35¢.

SCIENCE AND TECHNOLOGY

NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION

National Marine Fisheries Service

Southeast Fisheries Center bionumeric code—Part 1: Fishes (NMFS SSRF-659). 136pp. $1.25. The Southeast Fisheries Center, Pascagoula, Mississippi Laboratory uses a nine-digit numeric code to catalog marine organisms. The basic code was adapted from the FAO taxonomic code, to which generic and specific levels were added and considerable classification modifications adopted. This publication provides the code listing for fishes. Succeeding parts will deal with such groups as crustacea, mollusca, and various invertebrates.

Fish larvae collected from the Northeastern Pacific Ocean and Puget Sound during April and May 1967 (NMFS SSRF-663). 20pp. 30¢. Fish larvae belonging to 24 families and the suborder Blennioidea were collected. Variations in composition and numbers of larvae in the catch were associated with area,

water depth, water temperature, and time of day at which the collections were made.

Field guide to the angelfishes (Pomacanthidae) in the western Atlantic (NMFS CIRC-369). 14pp. 25¢. Illustrated guide to the six species of angelfishes of the Pomacanthidae family found in the western Atlantic.

NATIONAL BUREAU OF STANDARDS

Physics and chemistry. Vol. 76A, No. 6. Nov.-Dec. 1972. Annual sub. $17 ($4.25 more for foreign mailing). Single copy price varies; this issue $2.25. Contains papers of interest primarily to scientists working in the fields of physics and chemistry.

Neutron dose and fluence distributions in an infinite air medium (Tech. Note 745). 40pp. Available over-the-counter at Government Printing Office Bookstores, 45¢; by direct mail, 65¢. This note presents data on neutron transport in air for three point isotropic sources of interest in shielding applications.

Developments in cryoelectronics (Tech. Note 630). 72pp. 70¢. Surveys progress to date in developing new electronic instruments taking advantage of the unique properties of superconductors.

Building research translation—ventilated air inlets for dwellings (Tech. Note 710-6). 62pp. $1. Preliminary tests have shown the existence of a 'discomfort index,' a function both of the difference between the temperature in a room and the temperature of the air current, and of the speed of the air stream. Translated from French.

The Smoke Density Chamber Method for evaluating the potential smoke generation of building materials (Tech. Note 757). 20pp. 45¢. Reviews the Smoke Density Chamber Test Method and illustrates its use and application to assess smoke generation of building materials in fires.

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Land bank handbook: advance acquisition of sites for low and moderate income housing (PB-214 055). Piedmont Triad Council of Governments, Greensboro, N.C. 358pp. Paper, $9. Discusses organizing and operating a land bank, land bank market analysis and information systems, site selection, land and the law, legal issues of concern to land bankers, government programs relating to land acquisition and development, and recent legislative proposals related to land banking. Report includes a list of professional organizations of interest to land bankers.

The following reports comprising a comprehensive account of the history of the U.S. Atomic Energy Commission from 1939 through 1952 are available. Reports are written in a narrative, chronological style and contain many photographs of the people and places involved:

The new world—a history of the United States Atomic Energy Commission, Vol. I: 1939-46 (WASH-1214-V-1). U.S. Atomic Energy Commission, Washington, D.C. 816pp. Paper, $15. 1962.

Atomic shield—a history of the United States Atomic Energy Commission, Vol. II: 1947-52 (WASH-1215-V-2). 762pp. Paper, $15.

Investigation of sinking methods for removal of oil pollution from water surfaces: tests and evaluation of oil sinking materials (AD-750 853). U.S. Army Engineer Waterways Experiment Station, Vicksburg, Miss. 148pp. Investigates 23 materials as dry-application sinking agents for oil. Factors such as cost, availability, effectiveness in sinking and retaining oil, and hazards to personnel and plant life are considered.

Solid-phase forming (cold forming) of plastics (AD-752 136). Plastics Technical Evaluation Center, Picatinny Arsenal, Dover, N.J. 104pp. Paper copy only, $10. Discusses various solid-phase forming processes; thermoplastic materials suitable to these methods; part design; advantages and disadvantages of the processes; equipment and tooling requirements; processing effects on part properties; production economics; and suggested applications suitable to these techniques.

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